

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2002

HEARINGS

BEFORE THE

COMMITTEE ON ARMED SERVICES

UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

ON

S. 1416

AUTHORIZING APPROPRIATIONS FOR FISCAL YEAR 2002 FOR MILITARY ACTIVITIES OF THE DEPARTMENT OF DEFENSE, FOR MILITARY CONSTRUCTION, AND FOR DEFENSE ACTIVITIES OF THE DEPARTMENT OF ENERGY, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEAR FOR THE ARMED FORCES, AND FOR OTHER PURPOSES

PART 1

UNIFIED COMMANDS

MILITARY POSTURE/BUDGET AMENDMENT

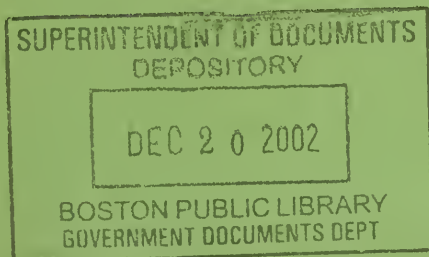
SERVICE SECRETARIES/SERVICE CHIEFS

BALLISTIC MISSILE DEFENSE

MARCH 22, 27; JUNE 28; JULY 10, 12, 17, 19, 2001



Printed for the use of the Committee on Armed Services



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U.S. GOVERNMENT PRINTING OFFICE

75-346 PDF

WASHINGTON : 2002

For sale by the Superintendent of Documents, U.S. Government Printing Office
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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2002

THURSDAY, MARCH 22, 2001

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

UNIFIED COMMANDERS ON THEIR MILITARY STRATEGY AND OPERATIONAL REQUIREMENTS

The committee met, pursuant to notice, at 9:49 a.m. in room SD-106, Dirksen Senate Office Building, Senator John Warner (chairman) presiding.

Committee members present: Senators Warner, Smith, Inhofe, Levin, E. Benjamin Nelson, and Carnahan.

Committee staff members present: Romie L. Brownlee, staff director; Judith A. Ansley, deputy staff director; and Scott W. Stucky, general counsel.

Professional staff members present: Charles S. Abell, Charles W. Alsup, John R. Barnes, Edward H. Edens IV, Gary M. Hall, George W. Lauffer, Thomas L. MacKenzie, Joseph T. Sixeas, Cord A. Sterling, and Eric H. Thoemmes.

Minority staff members present: David S. Lyles, staff director for the minority; Richard D. DeBobes, minority counsel; Daniel J. Cox, Jr., professional staff member; Richard W. Fieldhouse, professional staff member; Creighton Greene, professional staff member; Peter K. Levine, minority counsel; and Michael J. McCord, professional staff member.

Staff assistants present: Beth Ann Barozie, Shekinah Z. Hill, and Suzanne K.L. Ross.

Committee members' assistants present: Christopher J. Paul and Dan Twining, assistants to Senator McCain; George M. Bernier, III, assistant to Senator Santorum; Robert Alan McCurry, assistant to Senator Roberts; Arch Galloway II, assistant to Senator Sessions; Kristine Fauser, assistant to Senator Collins; David S. Young, assistant to Senator Bunning; Menda S. Fife, assistant to Senator Kennedy; Barry Gene (B.G.) Wright and Erik Raven, assistants to Senator Byrd; Frederick M. Downey, assistant to Senator Lieberman; Elizabeth King, assistant to Senator Reed; William K. Sutey, assistant to Senator Bill Nelson; Sheila Murphy and Eric Pierce, assistants to Senator Ben Nelson; and Larry Smar, assistant to Senator Carnahan.

**OPENING STATEMENT OF SENATOR JOHN WARNER,
CHAIRMAN**

Chairman WARNER. The hearing will come to order. As you are well aware, we are having a vote in the Senate, and as a consequence many of our colleagues are in transit from the Senate floor back to the committee.

The committee meets this morning for the first of a series of hearings on the status and requirements of our regional commands. Today we have two of our most distinguished regional commanders, Gen. Joseph W. Ralston, USAF, Commander in Chief, U.S. European Command, and Supreme Allied Commander, Europe; and Gen. Tommy R. Franks, USA, Commander in Chief, U.S. Central Command.

Clearly, you individually and those in your commands are on the very forefront of the risks that our men and women of the Armed Forces take the world over, but particularly in your two areas. You represent the finest troops that this country has ever produced, and they are not only carrying out faithfully the orders of the Commander in Chief, but doing so in keeping with the finest traditions of our U.S. military.

We rely on your unique perspectives as we here in Congress strive to fulfill our constitutional responsibilities as a co-equal branch of Government in providing for those troops and their families.

As we meet this morning, the largest contingency operations the U.S. military is engaged in around the world are in the Central Command and the European Command. Over 20,000 U.S. troops are stationed in Saudi Arabia, Kuwait, and Turkey and, indeed, the waters surrounding them, to enforce the no-fly zones over Northern and Southern Iraq and to help provide for the defense of Kuwait.

In Bosnia, we have entered our fifth year of peacekeeping duties with over 5,000 U.S. troops participating in NATO's Stability Force (SFOR) operation, 4,600 of whom are in the Bosnia region. I know there are plans to somewhat reduce those forces in keeping with the objectives of the President. I support the President in this, and we look forward to your comments. I think we are doing it in a very orderly way, in consultation with our allies, and in no way in derogation of our commitment as a full partner to NATO in this and all other responsibilities that we collectively face with that historic treaty organization.

In Kosovo, almost 6,000 U.S. troops participate in NATO's Kosovo Force (KFOR) operation, 5,500 of whom are in-country. With the rising tension in neighboring Macedonia, I am increasingly concerned, as we all are, about the safety of our troops in the Balkans, particularly those stationed in Kosovo and near Macedonia. If we are not careful, those troops and other NATO troops could be drawn into the conflict more than they are today. We will hear from you, General Ralston, on this developing situation.

This past year has also seen its share of tragedy, particularly in the Central Command's area of operation. The devastating terrorist attack of the U.S.S. *Cole* in the Port of Aden on October 12 last year, and the training accident in Kuwait just a week or so ago, brings home to all Americans the very real dangers our men and

women in uniform face every day. There are enormous risks in carrying out their missions in the cause of freedom.

The U.S.S. *Cole* tragedy also highlighted the growing terrorist threat facing our Nation and our military forward-deployed units, and the need for additional force protection measures to protect our soldiers, sailors, airmen, and marines. General Franks, we look to you to provide the committee with an update of the steps you have taken since the U.S.S. *Cole* attack, and the views that you have for the future as to that force protection enhancement within your area of responsibility. We would also like you to reexamine the engagement policy which led our forces into that region, and the necessity to continue that engagement policy, but I presume under somewhat different conditions. We welcome your testimony.

Before we begin, I would like to enter into the record at this time statements by Senator Strom Thurmond and Senator Jim Bunning.

[The prepared statements of Senator Thurmond and Senator Bunning follow:]

PREPARED STATEMENT BY SENATOR STROM THURMOND

Thank you, Mr. Chairman.

General Ralston and General Franks, I want to join the Chairman and the members of this committee in welcoming you.

Mr. Chairman, General Ralston and General Franks represent regions of the world in which the United States has a vital interest and has expended huge resources to secure peace and stability. Yet, more than 10 years after the end of the Cold War and the devastation in the desert of Iraq, our forces are deployed on commitments that appear to have no ending in the very same regions. In hindsight, we should have taken a different approach to the situations in the Balkans and Iraq. I hope that both our witnesses will focus on the future and on how we can end the cycle of violence in these regions. More importantly, I hope they will give us their perspective on how we can minimize the impact of the commitments in Kosovo and Southwest Asia on our troops and the readiness of our Armed Forces.

Mr. Chairman, I am also very interested in the quality of life of our forces stationed in Europe and those deployed to the Persian Gulf region. In particular, after the U.S.S. *Cole* incident, I would like to hear the witnesses' views on force protection and the terrorist threat facing our military personnel.

Mr. Chairman, I look forward to today's testimony and again want to thank General Ralston and General Franks and the soldiers, sailors, airmen, and marines they represent for their dedication and professionalism.

Thank you, Mr. Chairman.

PREPARED STATEMENT BY SENATOR JIM BUNNING

General Ralston and General Franks, thank you for coming before this committee today. We appreciate your service to this country.

Like my other colleagues, I applaud our men and women in uniform. They are indeed the best in the world. However, I have concerns about our military being stretched too thin and stressed, and participating in areas of the world where I believe we may have no national security interest. I fear that this is affecting our military's readiness and operations, as well as the safety and morale of our troops.

I've expressed my frustration before about our military's chain of command system. It is tough to get the truth and expertise that we need on these issues because of the chain of command.

We know the President is the Commander in Chief. Whatever his policy is, you have to salute and come over here and do it. I understand that. But it makes it very frustrating for us because we need to hear your expertise. Because you are the experts and the ones directly involved in these operations.

This committee is trying to work with you to be helpful. If we don't get candid answers from you all, then we simply can't do our jobs. Therefore, you can't do your job the way you'd like to do it, and neither can our troops.

So we would appreciate candor. We don't want your candor as soon as you retire and put on a suit. I'm always amazed how those who retire from the military, as soon as they put on a suit, say, "Now let me tell you how it really is."

Chairman WARNER. Now, Senator Levin will be forthcoming. I think in the need of time we have to get underway. Do you all have a preference as to who would like to proceed?

General FRANKS. I will defer to General Ralston.

Chairman WARNER. All right.

General Ralston.

STATEMENT OF GEN. JOSEPH W. RALSTON, USAF, COMMANDER IN CHIEF, U.S. EUROPEAN COMMAND, SUPREME ALLIED COMMANDER, EUROPE

General RALSTON. Mr. Chairman, thank you very much for the opportunity to appear before the committee today, along with my colleague, General Franks. I would like to submit my statement for the record—

Chairman WARNER. Without objection.

General RALSTON.—and then spend a few moments here on oral testimony, if I may.

I would draw your attention to the poster board that we have over here and just—I know you know this, Mr. Chairman, but for some of our other people that are watching here, sometimes I feel that the U.S. European Command Area of Responsibility (EUCOM AOR) may be misnamed, because it includes a lot more than Europe. It stretches, as you see, from the northern part of Norway to the end of South Africa. It includes the Middle East countries of Israel, Syria, and Lebanon. It includes all of Africa that you see there in green on that map.



Mr. Chairman, that encompasses 91 countries, and we have a little over 100,000 troops that are forward-based in the EUCOM theater to engage with these 91 countries.

Now, I might add that that is 8 percent of our uniformed Active Duty military. I do not believe that is too big of a price to pay for engagement with those 91 countries.

I would also add that those troops, being forward-based in Europe, as you can see on the map, are that much closer to General Franks' AOR should he need help there for redeployment.

I have some operations that I would like to talk about that are ongoing within the EUCOM AOR, and I would like to start with Operation Northern Watch, and if I could talk for a few minutes about this, and then, Mr. Chairman, as I understand later on perhaps we could have an opportunity go into closed session where we could talk about this in more detail.

Chairman WARNER. You are correct. We can do that in 222 Russell.

General RALSTON. First of all, as you can see, in Operation Northern Watch I support General Franks in his operation overall in Iraq, and what I am talking about here is just the northern part of that, which is the no-fly zone north of the 36th parallel.



I thought it might be useful to show a typical mission. We take off out of Incirlik Air Base in Turkey. You fly to the east for about an hour. You form up where those little circles are in different orbits, with a rather large force, about 40-some airplanes. There are tankers, there are Airborne Warning and Control System (AWACS), there are F-15s, F-16s, EA-6Bs for defense suppression, there are reconnaissance airplanes, there are U.K. aircraft, there are Turkish aircraft that are involved in this. We then go into northern Iraq. A typical mission may be 3 hours long, and then another hour back home.

Now, this is all done in support of our national policy, and what I am about to say is in no way intended to say that we have it wrong, or that we cannot support it, but I also want to get the facts on the record.

Let me give you an example of last year. In 2000 we flew in the north about 7,500 sorties. Now, this is not without risk, Mr. Chairman. I know you know that, but over 250 times last year our people were fired at that we know of.

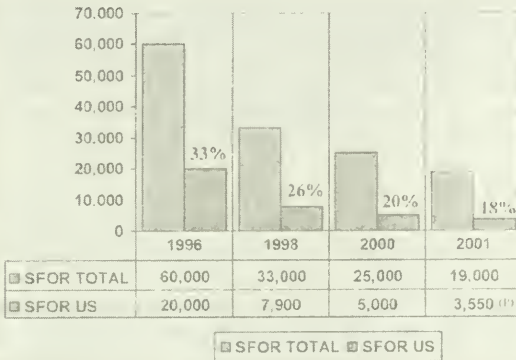
We responded over 60 times. That is more than once a week, and I might add that we are flying a lot of single-engine aircraft over northern Iraq. We have been doing that for a long time, and if the law of averages caught up with us, we should have had engine failure by now.

We willingly accept that risk, but I just want to point out to the committee that it is not a risk-free operation that our men and women are carrying out in Operation Northern Watch.

Next I would like to talk about Bosnia for a moment. We have had an operation ongoing, a NATO operation in Bosnia. Sometimes people do not realize the progress that has been made. In 1996, when we went into Bosnia, as you see on the blue bar on that chart we had 60,000 forces that went into Bosnia. Those forces depicted in red are the U.S. forces. That was 20,000. We were 33 percent of the force in 1996.



SFOR



34 Nations

Based on the improved conditions on the ground, and in consultation with our NATO allies, we were able to draw that force down, and as you notice today, we are just right at 20,000. The U.S. has just a tad over 4,000. We are about 20 percent of the force. I got approval from NATO, supported by the administration, just in the last couple of weeks, to make a further reduction in those forces. I think here in a few months we will be down to probably 3,500 Americans. We will be about 18 percent of the force.

So I think that chart dramatically shows the progress that we are making in terms of not only the conditions on the ground that allowed that, but in the drawdown of the forces.

Let me talk for a moment about Kosovo.

Chairman WARNER. Before you leave that subject, is it your professional judgment that that force level, be it ours or the combined force levels, is still essential to reach the goals that the United Nations and ourselves and our allies have set? That is where we fall into problems here. We put our troops somewhere, and then we are distracted, or go look at other situations. That situation in Bosnia

has quieted down, it is not on the front pages. Who is looking to determine whether that level, indeed, is still necessary?

General RALSTON. Mr. Chairman, every 6 months we do a review, in conjunction with our allies in NATO, and you are correct. It is my judgment that—well, first of all, the situation on the ground has improved dramatically since 1995.

Chairman WARNER. Basically no conflict.

General RALSTON. The reason that there is no conflict there today is because we have had those forces there. I do not want to keep forces there any longer than necessary, but at the same time, we need to keep forces there in order to keep that safe and secure environment.

Now, on a military aspect we have made enormous progress. In fairness, I must also tell you that economically, politically, we still have a ways to go, and we need to continue to keep that pressure on, but I would not recommend back to NATO, nor to the administration, nor to the Congress of the United States, that we do something that I do not believe is militarily sound. I fully support this force level, this reduction. We will continue to look for ways to bring that down, to ease the burden, but at the same time, we have a mission to carry out, and I want to make sure that we can do that.

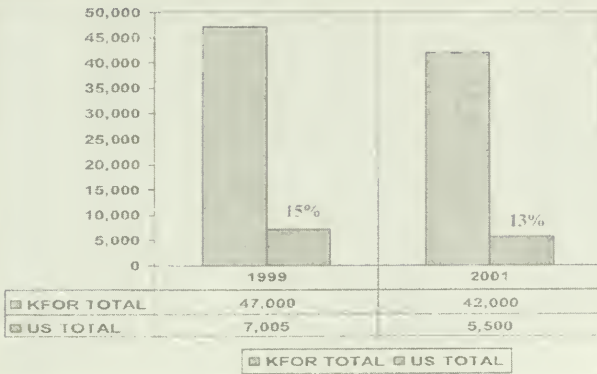
Chairman WARNER. What you are saying is that ethnic tensions that gave rise to that conflict are still there with such force and effect that if you pulled out the troops there would be a war tomorrow.

General RALSTON. Well, it is my professional judgment that if we precipitously pulled out the troops right now, that conflict would start again. Whether it is tomorrow or next week, people can debate.

With regard to Kosovo, let me show you a similar chart here. In 1999, when our forces went into Kosovo, we had about 47,000 troops from 39 nations, by the way. Sometimes people erroneously think that the United States is pulling the bulk of this effort, but you can see there, 39 nations went together with 47,000 troops. We had about 7,000 Americans.



KFOR



39 Nations

Today, overall we have about 42,000 troops in the Kosovo force. About 37,000 of those are in Kosovo itself, and another approximately 5,000 are in Macedonia. The U.S. contribution is about 5,500 people inside of Kosovo, and that varies between 13 and 14 percent of the force, so my message here is, this is not a U.S. operation. The U.S. troops are represented in the red that is on there, and the other nations, the other 38 nations are carrying the bulk of the operation that is there.

Next, please. There has been a lot of interest in the press in the past few days on Macedonia. Let me talk about that, if I might for a moment, in open session here, and perhaps we can go into more detail in the closed session. Let me have the big map first. This is Kosovo right here.

Central Balkan region



Chairman WARNER. The problem with that is that this is being transcribed for use by many others.

General RALSTON. Let me talk to colors. The country in orange is Macedonia, that is what we are talking about.

Now, if you would come down to the southeast there, in Greece, at the top of that border, you will see Thessaloniki. Point out Thessaloniki, right there. That is where all of our supplies going into Kosovo come into that port. They then go overland, up through the orange country of Macedonia, into Kosovo, which is right at that point, right there.

Now, as I said before, we have about 5,000 of the KFOR forces, mostly supply troops, mostly logistics troops that are in Macedonia.

One of the things that is of concern when we have the instability there is our supply route, so I have recommended to NATO, and NATO is looking at alternate ways of making sure that we can supply our forces that are in Kosovo.

One way to do that is through Albania. Another way is through Montenegro. Another way is through southern Serbia, as our relationships with Belgrade have improved, and we are doing the prudent planning now that would allow us to have alternative supply routes.

The problem in Macedonia itself—let me go to the next chart. On this same map, you see where Kosovo is there, and notice the area in blue that goes into southern Serbia and down into Macedonia. Those areas in blue are those areas in Serbia and in Macedonia where there is a majority Albanian population. Even in Serbia, that area in blue, they have greater than 50 percent Albanian population there. In Macedonia itself you have about a 65-35 split. About 65 percent of the population is Slavik, about 35 percent is Albanian.



The Government of Macedonia is a democratically elected Government, and it is a coalition Government, including members of the Albanian population. We have encouraged the Macedonian Government to give political access and economic opportunity to the minority Albanian citizens that are there.

The extremists that you hear about in the paper, right now I believe this is not something to be alarmed about. It is something always of concern when you have potential violence, but we believe that there are approximately 100 extremist Albanians that are involved in the hostilities.

My advice to NATO has been that we need to condemn extremism wherever it comes from, and in this particular case from the

Albanian extremists. We need to encourage the Macedonian Government to give political access to all their citizens, and I do believe that we can bilaterally, the nations can help the Government of Macedonia. They can help them diplomatically, politically, economically, and we in NATO and in the Kosovo force need to do our part inside Kosovo to make sure that there are not armed extremists coming from Kosovo into Macedonia. We can talk more about that in detail in the closed session.

Chairman WARNER. The Secretary-General said he needed 1,400 additional troops. Now, could you speak to your military judgment as to that request, and most specifically, how it would affect the U.S. and our U.S. response? As a participant we wish to bear our share of the burdens and the risks in this operation.

General RALSTON. Yes, sir. Unfortunately, if I could say this, when the Secretary-General made his comments it was in a news conference that was associated with Macedonia. In fact, the two battalions that we asked for several weeks ago are to replace some Portuguese troops that are leaving. They have not left yet, but two companies to do that, and for some of the activities there.

Now, some of the nations have come forward and said that they will provide additional troops to back-fill. My judgment right now is, we do not need additional American forces. I think we are carrying our proper share of that at this time, and I think we are going to be OK.

Now, what we have done, we have taken forces out of that 37,000 that are in Kosovo, and we have moved more forces down to the border to do a more effective job of patrolling the border.

Mr. Chairman, I would also like to point out that this is an enormously difficult border to police. It is very mountainous terrain. It is wooded. There are trails that have gone back and forth across for centuries. The people there do not know there is a border there. I mean, they have brothers and sisters and uncles and aunts that live on either side of that. They have traded back and forth for centuries, and so it is enormously difficult to seal that border. I think that would be a mistake for us to set that as the goal, or the mission.

Now, we can do, I think, a good job of making sure that there are not armed extremists that are going back and forth, and that is what we should be concentrating on from a NATO perspective on our side of the border.

Mr. Chairman, I would like to spend a moment talking about Africa. We have significant problems in Africa in terms of economic, political, humanitarian issues. We are working with many of the countries in Africa to address this. We have just recently trained two battalions of the Nigerian Army for their further employment in Sierra Leone. We are about to undertake training a Ghana battalion in Ghana, and a Senegalese battalion in Senegal, and then the plan is to go back and train some additional Nigerian battalions.

This is, I think, a proper role for us to try to help the African nations deal with the problems that they have there. I do not want anyone on the committee to be surprised if you hear that we have American soldiers in Ghana, or Senegal, or Nigeria. What they are

there doing are training the local battalions for their employment in support of the United Nations in Sierra Leone.

Mr. Chairman, in conclusion, there are two issues that I have worked hard with the Pentagon in terms of resources for the EUCOM area, and only two issues. I had two major budget issues that I worked with them, and that was for real property maintenance and for military construction in the European theater.

Mr. Chairman, I know you know this, but 10 years ago we had about 360,000 troops in Europe, and we drew them down to just a little over 100,000. Now, it was a proper decision back in 1991 to not spend money on military construction and real property maintenance until we knew what we were going to keep in Europe.

Mr. Chairman, unfortunately, we went for the better part of a decade without any military construction or real property maintenance, and as a result, the soldiers, sailors, airmen, and marines that are living and working in EUCOM are in facilities that I am not very proud of. Here are some pictures, for example, of barracks problems that we have in EUCOM. Next slide, please.



EUCOM FAMILY HOUSING



Family Housing, Germany

Military family housing is a problem. Let me outline the standards that we have for our military housing, and I believe the American people would understand this. If you have a family that is big enough that entitles you to a three-bedroom apartment, we believe that you ought to have two bathrooms for that apartment. We believe you ought to have a stove and a refrigerator in the kitchen, and we believe you ought to have a washer and a dryer in that apartment.



EUCOM BARRACKS



Souda Bay, Greece



Ramstein AB, Germany

Many of these are three-story walkup apartments. We have young mothers that have two or three young children. For her to wash the clothes she has to go down three or four flights of stairs to the basement. What does she do with the young children while she is doing that? She has to carry them along with the laundry downstairs to do that.

I do not believe that is asking too much for these standards, and I must tell you, Mr. Chairman, even with these very modest standards, 69 percent of our Army families in Europe are living in conditions that do not meet those standards of a washer and a dryer, a stove and a refrigerator, and two bathrooms.

Mr. Chairman, when I worked this with the Pentagon, I briefed the Joint Chiefs, I briefed the Defense Resources Board, I talked to the Secretary of Defense, and I believe that I have a sympathetic ear. I do not know what will be in the budget when it comes over. I have not seen that, but if it comes over the way that I hope that it does, I would encourage the support of the committee.

Mr. Chairman, thank you for the opportunity to appear before you today.

[The prepared statement of General Ralston follows:]

PREPARED STATEMENT BY GEN. JOSEPH W. RALSTON, USAF

INTRODUCTION

Mr. Chairman, distinguished members of the committee, it is my privilege to appear before you as Commander in Chief, United States European Command (USEUCOM), to discuss the posture of U.S. Forces. First, however, I want to make a few comments about the area in question.

The U.S. European Command encompasses American military activities in over 13 million square miles of the globe and includes 91 sovereign nations. It stretches

from the northern tip of Norway to South Africa, and from the Atlantic seaboard of Europe and Africa, to parts of the Middle East and out beyond the Black Sea.

I began my tenure in the U.S. European Command last May. Since my arrival, our men and women have continued to carry out a multitude of operational commitments throughout Europe, Africa, the Levant, the waters of the Mediterranean, the skies over Iraq, and throughout the Balkans in support of the North Atlantic Treaty Organization (NATO), commitments to our regional friends and allies, and our national interests. Additionally, there are new opportunities in this theater—opportunities that properly approached will further strengthen the international position of the United States. These opportunities include working with African allies to improve their peacekeeping capabilities, engagement with Russia and the countries of the Caucasus region, U.S. influence on the evolving European defense posture and the future of NATO, and the enhancement of important and vital interests to the economic and national security of the United States. Our forward presence in Europe, engagement programs in Africa and Eastern Europe, and the ability to deploy and respond quickly and effectively throughout the region contributes to the preservation of stability throughout much of the area of responsibility (AOR).

While success should be acknowledged, we must exercise continued vigilance by pursuing modernization to meet ongoing requirements, as well as develop future forces to take advantage of key strategic opportunities as they arise. Inadequate funding for, and attention to, critical readiness and modernization issues will jeopardize the careful balance between USEUCOM's missions and available resources. Like operation and maintenance (O&M) dollars, modernization funding must also be balanced to ensure resources remain proportionate to mission requirements. American military personnel positioned overseas and going about the business of the Nation every day have proven time and again that they are our greatest national resource. Like every national asset, they require care and cultivation to ensure they maintain the capability edge over any potential adversary. Addressing critical quality of life, military construction (MILCON), real property maintenance (RPM), and modernization needs is central toward maintaining this edge.

During my comments today, I will discuss the status of many programs. I should note, however, that the programs I will discuss, and their associated funding levels may change as a result of the Secretary's strategy review that will guide future decisions on military spending. The administration will determine final 2002 and out-year funding levels only when the review is complete. I ask that you consider my comments in that light.

A CHANGING AND CHALLENGING STRATEGIC ENVIRONMENT—READINESS

Readiness of USEUCOM assigned forces is my top priority. It is the cornerstone of our ability to respond to crises and it enhances our strategy of engagement. Most of our activities relate to readiness because they demonstrate and enhance our capability to deter potential adversaries, while reassuring our friends. Such activities require ready forces and exercise our ability to meet commitments and promote joint and multinational interoperability. Taken together these activities can serve to help shape the international environment by incorporating other nations and improving our multinational expertise in the region; they improve our ability to respond unilaterally or in concert with other nations; and they prepare us now for the uncertain regional requirements of the future.

Thanks to the support of Congress, forces assigned to this theater are ready and well supported in their current operations. The command's forces are fully engaged and continue to rely upon augmentation and Reserve Forces to carry out our many diverse missions. Dedicated young men and women valiantly executing a wide variety of operations to support our national strategy make up the heart of our theater readiness. Over the last year, we demonstrated our readiness by supporting air operations over Northern Iraq, NATO-led peacekeeping operations in Bosnia and Kosovo, humanitarian relief operations in Mozambique, and training of Sub-Saharan African troops to support United Nations (UN) operations in Sierra Leone.

JOINT TRAINING

Training is a primary pillar of readiness and an inherent responsibility of being in command. For USEUCOM, readiness training has increasingly become part of our Theater Engagement Plan. However, over the past 2 years efforts to cope with rapidly shrinking training and training-dependent budgets, such as strategic lift, have resulted in several cancelled and restructured exercises. These cancellations have frustrated our efforts to provide high-quality readiness training to meet theater engagement needs.

Our challenge is to support a proper mix of readiness and theater engagement training within resource constraints. The U.S. European Command has met its congressional mandates for Chairman of the Joint Chiefs of Staff (CJCS) exercise-related operations and personnel tempo (OPTEMPO-PERSTEMPO) reductions. Additionally, strategic lift funding cuts during this fiscal year may force cancellation of continental U.S. (CONUS)-based participation by active, Reserve, and National Guard forces in various training and engagement exercises. In a worst case scenario, these cuts may also reduce training and engagement in Israel and Nigeria, and result in cancellation of half of the Joint Combined Exchange Training (JCET) activities in Africa.

After taking a hard look at our training program for potential improvements in quality, effectiveness, and efficiency, we began implementation of a 3-year transition plan to take USEUCOM from a training program focused on events, to one focused on readiness and theater engagement objectives. This revised program will exploit opportunities within the total program, resulting in fewer, but higher quality CJCS-sponsored exercises. I do not anticipate that this transformation of USEUCOM's part of the CJCS exercises in fiscal year 2002 and beyond will result in a significantly less costly program. A requirements-based, objectives-driven exercise program will, however, provide higher quality training and engagement at a size and cost that is appropriate to, and justified by, our National Security Strategy.

ENGAGEMENT

Side-by-side with readiness activities are the other exercises, operations, and training which focus primarily on assisting and supporting other nations in the region to develop effective democratic political and military systems.

To help guide Congress in its decision-making, many of you have traveled to the European theater and have witnessed efforts to extend contacts beyond Western Europe through engagement. Over the past several years this process has helped to positively shape our security environment. I believe this approach is key to continued long-term peace, security, and prosperity as USEUCOM works along side, and in active cooperation with, a number of governmental and non-governmental organizations.

FORWARD PRESENCE

America's permanently stationed forces in Europe number just over 100,000 troops—down from well over 300,000 during the Cold War. The current force level represents a 65 percent reduction from 1990. In my opinion, this must be considered the minimum level needed to execute our current National Security Strategy, meet NATO requirements, and provide support and staging for U.S. based forces that in time of need would flow into or through the theater.

Key to our engagement efforts are our forward-deployed and forward-based forces, which continue to make significant contributions in protecting U.S. national interests. In peacetime, forward presence of naval, land, and air assets provides unparalleled access to countries in transition. In crises, the forward presence of our forces enables a rapid transition from engagement to response. Forward presence is a critical enabler for USEUCOM activities.

Continued forward presence is vital to implementing our current strategy, as our forces are able to respond more quickly—demonstrated through a number of deployments last year to the Balkans, Southwest Asia, and Africa. Surrendering this forward position would seriously degrade our ability to engage in peacetime or deploy in the event of armed conflict. The General Accounting Office (GAO) traveled through the AOR recently to discuss issues related to forward basing. Their report is due for release this spring and I believe we presented solid evidence of the benefits of forward basing.

DEFENSE COOPERATION AND SECURITY ASSISTANCE

Defense Cooperation and Security Assistance programs are vital components of Departments of State and Defense initiatives supporting the development of interoperable defensive capabilities, the transfer of defense articles and services, and the international military training of foreign military and civilian personnel. Through the medium of 38, and soon to be 40, Offices of Defense Cooperation, we are in partnership with U.S. embassies throughout the theater conducting primary military engagement in support of American foreign policy goals.

Defense Cooperation in Armaments (DCA) promotes vital security interests through enhanced cooperation among key defense industries, and between DOD and West European Ministries of Defense. DCA encourages the development of inter-

operability on the "drawing board" and inherently strengthens U.S.-European military and political relationships.

Likewise, Foreign Military Sales (FMS) of \$4.7 billion in fiscal year 2000 to Europe demonstrates the continued primacy for U.S. security interests of trans-Atlantic defense relationships. FMS encourages interoperability between U.S. and European forces, maintains a strong U.S. presence in the development and implementation of the Defense Capabilities Initiative (DCI), and helps modernize the militaries of new friends and partners in ways critical to our security interests. We in Europe work closely with the Defense Security Cooperation Agency and the Services to ensure that U.S. European Command priorities are reflected.

Foreign Military Financing (FMF) provides irreplaceable resources for our friends and allies, without which U.S. influence over the dynamic transformation of Central and Eastern Europe and key African partners would be affected. The program provides access to U.S. expertise in defense restructuring and management, and enables participants to acquire U.S. military goods, services and training. The new NATO members and the stronger aspirants for membership provide excellent examples of the value of this program.

INTERNATIONAL MILITARY EDUCATION AND TRAINING

I cannot overemphasize the importance of International Military Education and Training (IMET) as an integral component of long-term beneficial change in foreign militaries, as foreign military and civilian leaders encounter first hand the American civil-military culture. The priorities of the program are professional development, the role of the military in a democratic society (under the Expanded IMET initiative, or E-IMET), and English language development. In fiscal year 2000, the program trained almost 1,500 military and civilian international students in U.S. military schools, with nearly 550 officers attending professional schools—including senior and intermediate service schools. Under E-IMET, Mobile Education Teams (MET) traveled to 30 countries in the region last year providing instruction to over 2,000 civilian and military personnel in military justice and human rights, civil-military relations, health resources management and integration, defense resources management and budget planning, equal opportunity, and maritime counter-drug law enforcement. Student projections for this year match last year's numbers.

PARTNERSHIP FOR PEACE

The Partnership for Peace (PfP) program continues to meet its goal of deepening interaction, extending stability in the East, providing consultation mechanisms for participants who feel threatened, assisting in the pursuit of democratic reforms, and preparing for possible NATO membership. The program has returned huge dividends for operations in Bosnia, with over 30 nations providing support and nearly one-third of the forces coming from non-NATO nations. The growth of the PfP program over the past 6 years has been dramatic and, in addition to real world operations, Partnership exercises provide superb training and equally important exchange opportunities.

JOINT CONTACT TEAM PROGRAM

The Joint Contact Team Program (JCTP) has been one of USEUCOMs most successful engagement programs over the past 9 years. Through modest investments of money, personnel, and expertise, it has helped host nation militaries become familiar with the culture of the U.S. military, and through this process exposed to the best in American values and democratic ideals. By leveraging the expertise of America's Active and Reserve Forces, especially the unique capabilities of the Reserve component's (RC) State Partnership Program (SPP), JCTP has modeled and demonstrated the best practices of America's military force. It has thus helped host nation militaries move toward providing constructive roles to their developing democracies.

The program's success is most evident in the three new NATO member countries. Poland, Hungary, and the Czech Republic's needs have matured beyond familiarization and exposure—they are ready to "graduate" from JCTP. Their needs must now be met with additional services and technical training properly administered under U.S. security assistance programs and plans are now being formulated to move beyond JCTP. Where possible, links to their SPP states will be maintained to facilitate this transition.

This natural transition in the new NATO countries is the realization of USEUCOM's Theater Engagement Plan and is the eventual goal for all of the JCTP countries. This transition also allows the program to move, by close coordination

with the U.S. Department of State, to new host nations requesting the unique engagement capabilities available through JCTP.

STATE PARTNERSHIP PROGRAM

A key program in this important engagement effort is the Reserve Component's State Partnership Program. SPP grew out of JCTP and uses Reserve personnel from various National Guard and Reserve organizations to partner with defense ministries of Central and Eastern European countries. Last year was extremely successful as National Guard soldiers and airmen conducted dozens of events including 51 Minuteman Fellowships (MMFs), nine "Guardex" events, six PfP as well as several "In the Spirit of Partnership for Peace" exercises, executed more than 25 percent of all events for USEUCOM JCTP, facilitated civic leader visits, and conducted a number of engagement activities with the Russian Federation. The MMF program bridges gaps in other engagement programs and touches levels of society that other programs cannot reach. Through this program we were able to share with our partners our experience and expertise in education, economic development, disaster response, environmental topics, and numerous other subject areas.

When delegations from Tennessee, Minnesota, Indiana, Alabama, Vermont, Illinois, Kansas, and California conducted civic leader visits to SPP counterpart countries, the long-term vision for SPP had been realized—moving beyond military-to-military contacts into other important elements of society. Through these activities, state civilian officials in the realms of education, commerce, agriculture, medical emergency services, and disaster response exchange their considerable knowledge and expertise with their partner-nation counterparts.

MARSHALL CENTER

One of the most important and effective regional engagement activities within the U.S. European Command is the George C. Marshall European Center for Security Studies. The Marshall Center strengthens security and cooperative relationships among key nations within the theater. It serves as an essential institution for bilateral and multilateral communication and military and civilian exchanges throughout the region.

This organization builds bridges between militaries that once stared at one another through the crosshairs of weapons of war. Under the auspices of the Marshall Center, the once-warring parties of Bosnia came together last year and agreed to slash military spending. Marshall Center graduates have served as peacekeepers in Bosnia and as far away as East Timor. Graduates from Hungary, Poland and the Czech Republic are now helping to integrate their militaries into NATO. Marshall Center programs have led a number of nations to the democratic restructuring of their defense planning and crisis management processes. Graduates from the Republic of Georgia wrote Tbilisi's recently announced national security strategy. Many Marshall Center graduates now serve as ambassadors, defense attachés, chiefs of defense, members of parliament, and advisors to presidents around the world. These graduates possess a deeper appreciation and respect the concepts of democracy as we understand them, and for human rights and the rule of law.

The Marshall Center is at the forefront in reaching out actively and comprehensively to militaries and defense establishments to lower regional tensions, strengthening civil-military relations in developing nations, and addressing critical regional challenges. Open to leaders from over 47 countries, the Marshall Center is a pillar of America's efforts to shape the world in ways that reinforce and reflect our values and national security interests. It is therefore important that the Marshall Center remains fully resourced in order to continue its excellent work in support of American foreign policy objectives.

THE AFRICA CENTER FOR STRATEGIC STUDIES

Drawing on the success of the Marshall Center, the Africa Center for Strategic Studies (ACSS) was established in December 1999 and conducted its second seminar last July in Botswana. While it does not yet have a permanent location to call home, its rotating seminars provide a unique engagement vehicle in Sub-Saharan Africa. Both civilian and military senior defense officials of almost every African nation gather with U.S. and other friendly nation counterparts to examine and compare experiences on national security strategy, defense economics, and civil-military relations. They then validate their impressions in an end of session capstone exercise. Its forum of open, two-way discussion has enjoyed great success on the continent and builds and strengthens bilateral and multilateral relationships.

NEAR EAST—SOUTH ASIA CENTER FOR STRATEGIC STUDIES

In January a year ago the Secretary of Defense approved the establishment of the Near East—South Asia (NESA) Center under the management of the National Defense University (NDU), Washington D.C. The purpose of the Center is to enhance regional stability by providing an inclusive, neutral institution where regional military, diplomatic, and national security professionals can broaden their understanding of the national strategy formulation process, examine regional security issues, improve their defense-related decision-making skills, and develop cooperative relationships with one another. Participation is open to military and official civilian representatives of all countries within the NESA region with which the U.S. Government maintains formal diplomatic relations. It is also open to non-NESA countries that have strategic interests in the NESA region. The inaugural two-day conference was held at NDU in November, and the first executive seminar will be held in Washington during May.

AFRICAN CRISIS RESPONSE INITIATIVE

The African Crisis Response Initiative (ACRI) is a Department of State training program designed to improve the capabilities of several African nations to conduct humanitarian crisis response and peacekeeping operations. ACRI-trained forces could be offered by their governments for peacekeeping and humanitarian operations conducted by the Organization of African Unity, the UN, sub-regional African organizations, or any other multinational coalition. ACRI also works to shape the African environment by promoting professional and apolitical militaries, reinforcing respect for human rights, and providing a strong example of democratic civil-military relations. This UN-approved program of instruction combines U.S. and UN peacekeeping and humanitarian relief operations doctrine. Program instruction develops common standards for peacekeeping and humanitarian relief operations among the participating ACRI countries. Recently, the program was expanded to include brigade-level training focusing on the command, control, and logistical aspects of supporting a multinational brigade in the field.

OPERATION FOCUS RELIEF

Last year USEUCOM was tasked to help train five Nigerian battalions, one Ghanaian battalion, and one Senegalese battalion in order to participate in UN operations in Sierra Leone, and more strategically, to support the professional development of the Nigerian military—an important force for regional stability. This operation is being conducted in fiscal year 2001 using State Department peacekeeping operations (PKO) funding as well as DOD resources made available under Presidential drawdown authority.

To accomplish this mission, Special Operations Command, Europe (SOCEUR) was tasked to execute the mission with Army and Air Force units in support. Based on information provided by the SOCEUR-led Military Survey Team, a 10-week training program using U.S. instructors and an equipment support package was developed. Execution of the train-and-equip program was designed for three-phase completion, commencing last October, with mission accomplishment likely later this year. Upon completion of the training program, each battalion should be capable of operating and maintaining newly acquired equipment, conducting daylight company level attacks and conducting day and night defensive operations as a maneuver company under command and control of a battalion headquarters.

We have now completed phase one of the three-phase program and our personnel have performed magnificently. However, interagency policy-level decisions must be made early enough in the process so funding and resources can be programmed to meet timelines and support requirements. Additionally, human rights vetting must be complete for all personnel to be trained, to include attached units, prior to the initiation of training. There must also be host nation agreement on the training program at every political and military level in order to assure mission success. Operation Focus Relief is not an operation without risk. However, with only 200+ U.S. personnel assigned in non-combatant roles, the dollar investment is minimal and the payoff great in that it is successfully training local forces to deal with regional problems. In this way, Operation Focus Relief is pioneering a new method of engagement.

KEY THEATER MISSIONS AND CHALLENGES

Challenges in the USEUCOM AOR will continue as the U.S. works to strengthen and maintain the NATO structure, prepares forces to better respond to future conflict, shapes the international environment through engagement, executes contin-

agency operations, and monitors potential future conflict areas. I have highlighted key challenges and continuing missions below to give an idea of the diversity of theater challenges and missions.

MULTINATIONAL INTEROPERABILITY

"The overall effectiveness of multinational operations is . . . dependent upon interoperability between organizations, processes, and technologies."

Joint Vision 2020

The U.S. European Command and America's allies and friends recognize that most military operations in the future, from peacekeeping and humanitarian relief to a major theater war, will typically be multinational in character. Success in multinational operations will depend on two factors: the capabilities of the national forces involved in the operation; and the degree to which these forces can be melded to create an effective force. These factors will demand a high level of interoperability and enhanced capabilities between the participating national forces.

In this vein NATO has met and excelled at every challenge since the end of the Cold War precisely because of its ability to commit multinational forces structured to meet military threats to its members. NATO's greatest challenges today originate not externally, but from within. The growing asymmetry in technology between European and U.S. military forces is producing a serious imbalance in our military capabilities. Furthermore, Europe's shrinking defense industrial base and limitations in production of advanced military capabilities could lead to a future where only the U.S. has the ability to engage globally.

The Defense Capabilities Initiative, launched in April 1999, is an effort by the European members of NATO to resolve glaring capabilities shortfalls between them and the U.S. as evidenced by past NATO exercises and Operation Allied Force in and over Kosovo. The Capabilities Initiative's two primary thrusts, improving national capabilities and exploring ways to pool capabilities, allow our allies and partners to enhance interoperability, take advantage of economies of scale, and afford participation by those countries that do not possess the resources to go it alone. The initiative specifically targets five capabilities: effective engagement; deployability and mobility; survivability of forces and infrastructure; sustainability and logistics; and communications/information systems. As Europeans work to improve their national and collective security, we have encouraged defense cooperation and procurement using the DCI roadmap and believe it mutually reinforces the needs of NATO and the European Union (EU).

The DCI's success depends upon whether Europeans are willing to spend more, and more wisely, in narrowing the gap between their military technology and warfighting capability, and our own. Should Europe prove unable to engage in military operations at or near the level of U.S. capabilities, it may leave them vulnerable and limit the U.S. in some cases to unilateral action. Such a future undermines America's strategic vision and assumptions—diplomatically, economically, and militarily. Finite resources and domestic political realities dictate that unilateral action cannot be the future norm. Unilateral action endangers the historical link between the American and European peoples. While the issue of DCI is being worked at the highest levels in NATO, it is critically important that Congress work to engage their European counterparts on this issue. The U.S. must continue to engage with its European allies to help foster the necessary changes to enable Europe to remain a contributing strategic partner across the spectrum of potential operations. DCI is a crucial area on which the future of a strong Trans-Atlantic link may very well depend.

EUROPEAN UNION AND NATO SECURITY STRUCTURES

The establishment of a common foreign policy, supported by a military capability, within the EU is one of the most important political-military issues facing Europe and the United States today. The European Security and Defense Policy (ESDP) is worked hard, continuously, and at presidential and prime ministerial levels in every capital in Europe. If the military and political links that eventually define the relationship between NATO and the EU do not result in transparency, coordination, and a cooperative effort, it places at serious risk the future of the alliance. Indeed it is the form these permanent arrangements between the two will take, and assured EU access to NATO's planning capabilities, that are the most contentious and potentially destructive questions currently under debate.

The recently completed Foreign Minister's meeting in Brussels was not able to reach agreement on these issues and will require much effort by the new administration. We believe that SHAPE headquarters can play a constructive and indispen-

sable role by accomplishing the future military planning for both organizations, thereby negating the need for a duplicative headquarters solely to support the EU.

The European Security and Defense Identity (ESDI) within NATO continues to evolve within U.S. redlines as the EU develops, through the ESDP, both capabilities and institutions for its security and defense aspirations. Even though the progress to date has generally met U.S. expectations, I would suggest that officials in Washington remain vigilant to ensure that ESDP remains relevant from a U.S. perspective. They should emphasize the requirement for Europeans to develop their capabilities, maintain NATO-EU linkages, and underscore the necessity for the inclusion of non-EU NATO members in emerging security and defense arrangements.

Successful implementation of the European Security and Defense Policy within the European Union will require a concerted effort between the European members of NATO, EU members who are not in NATO, and Canada and the United States. This cooperation is essential to build the military and political links between NATO and the Union necessary to achieve a common strategic vision and make the needed improvements in technological capabilities.

Last November witnessed positive developments in the Capabilities Commitment Conference. This effort has been a primary focus of the French during their 6 months as President of the EU last year. The planning scenarios used to determine capabilities and forces required for the ESDP Headline Goal Force have remained realistic. In this regard, the EU has commitments for a Rapid Reaction Force (RRF) of up to 60,000 personnel, which is the minimum goal. The EU member countries placed a total of 100,000 troops, 400 combat aircraft and 100 warships at the EU's immediate disposal to support this RRF. If this force becomes reality it is sufficient to establish the EU as a significant military power.

The military staff at SHAPE played a very constructive role in assisting the EU's interim military staff in the development of these goals. The Catalogue of Forces turned out to be impressive, with high-end capabilities that are fully in line with Europe's DCI efforts. My main apprehension regarding capabilities is that they remain compatible with NATO Force Goals once the EU force is established and that the Europeans follow through with the necessary financial commitments to correct identified capability shortfalls.

In my role as the military commander of NATO's forces (SACEUR), I am fully engaged in providing advice and perspective as this issue evolves. In my estimation, if handled successfully by NATO HQ in Brussels and the European Union, the ESDP process will strengthen the security posture of the European continent. However, there are many complicated factors remaining before this capability is realized. The central issue, in my view, is the method by which a plan is developed and presented. When a potential conflict or crisis emerges the planning should be conducted by the SHAPE staff, with EU military augmentation. The Deputy SACEUR would then take the completed plan to the EU and I would send it to the NATO political authorities. If NATO elects not to involve itself, the EU could pick up the mission and deploy forces as required. If the process does not follow this model the EU will be unnecessarily creating large and redundant staffs and a real possibility of double counting and tasking existing NATO forces. Realization of ESDP largely hinges on the Europeans' willingness to make the necessary fiscal and political commitments. Any newly financed capabilities, however, must be in line with DCI—not duplicating but rather reinforcing alliance capabilities.

NATO ENLARGEMENT AND INTEGRATION

There are currently nine European nations that aspire to NATO membership. While the decision to expand the alliance is a political one and will ultimately be made in capitals across Europe and North America, an aspirant's military readiness will be scrutinized and is certainly part of the equation. Thus far, the nine aspirants have benefited from U.S.-funded defense assessments as well as from the NATO Membership Action Plan with its associated Partnership Goals. These mechanisms have provided a valuable roadmap toward reform and interoperability in the event that additional nations are offered NATO membership.

As for the three newest members of the alliance—Poland, Hungary, and the Czech Republic—the Interagency Group estimated that a 10-year process would elapse before these nations fully transition from past Warsaw Pact doctrine, equipment, and organization to NATO interoperability. One should avoid any unrealistic expectations of full integration this early—only 3 years since the Madrid invitations. Nevertheless, they have made great progress. Each has performed well in both exercises and deployments, including the very demanding environments of Bosnia and Kosovo where they share the burden through a contribution of nearly 2,500 troops to the international effort.

EUROPEAN REACTION TO MISSILE DEFENSE DEPLOYMENT

A number of potentially hostile nations are working to develop long-range missiles to coerce and threaten countries in North America and Europe. President Bush has stated that we will deploy missile defenses as soon as possible. These defenses, he has made clear, must protect not only the United States and our deployed forces, but also our friends and allies.

NATO's Strategic Concept also recognizes that "the Alliance's defense posture against the risks and potential threats of the proliferation of (nuclear, biological, and chemical) weapons and their means of delivery must continue to be improved, including through work on missile defenses." As the U.S. pursues this capability, I suggest it continues to consult our friends around the world. Open and frank discussions on this initiative between the U.S., NATO, and our other European allies, will further understanding and help avoid alienating our valued friends.

The defenses envisaged will reinforce the credibility of U.S. security commitments and the credibility of NATO as a whole. No one can reasonably argue that Europe would be more secure if the U.S. were less secure from a missile attack. An America able to defend itself from missile attacks is an America better able to defend Europe and common Western security interests. As consultations proceed with allies on missile defense, we realize they will continue to consider the appropriate role of missile defenses in their respective national security strategies for dealing with the changing international threat environment. In keeping with the fundamental principle of the alliance that the security of its members is indivisible, the United States is open to discussing possible cooperation with allies on longer-range ballistic missile defense, just as we have with our discussions and cooperation in the area of Theater Missile Defense.

FORCE PROTECTION

Force Protection (FP) remains a top USEUCOM priority. We are exercising an aggressive Antiterrorism/Force Protection (AT/FP) program providing clear AT/FP policy, measures, and tools to mitigate risk and maximize security for our personnel and their families. We have implemented a number of innovative AT/FP programs, examining the application of state-of-the-art technology to enhance access control and explosive detection, and are continuing our efforts to field mass notification systems throughout the theater. We are making progress, but resourcing continues to challenge our AT/FP Service priorities.

U.S. European Command is in the staffing process of publishing a significantly updated AT/FP Operations Order (OPORD) 01-01 prescribing AT/FP standards and requirements. These new mandatory requirements encompass FP engineering design standards for new construction, major renovations, and existing facilities. USEUCOM has also instituted a comprehensive Installation AT/FP Program Manager course to train the unit FP officers in our AT construction and design standards. To date, we have established AT/FP responsibilities for DOD elements and personnel at 67 Chief of Mission locations throughout the USEUCOM AOR.

Coupled with this, 137 AT/FP vulnerability assessments, including 74 Joint Staff Integrated Vulnerability Assessments, have been undertaken over the past year. These assessments have identified AT/FP vulnerabilities and assisted commanders in addressing those deficiencies through the use of countermeasures, procedural changes, and resourcing—endeavoring to eliminate or mitigate their potential exploitation by terrorists.

We have developed and fielded a web-based Vulnerability Assessment Management Program (VAMP). The VAMP captures results of vulnerability assessments, prioritizes AOR vulnerabilities, identifies deficiencies, and lists corrective actions needed or completed. VAMP is a management tool available to every commander and AT/FP officer from the theater down to the installation level and allows commanders and decision makers the ability to track and identify the actions taken or required to correct and/or mitigate vulnerabilities at specific installations throughout the AOR.

We employ risk management and mission analysis processes in all deliberate, crisis, and contingency operational planning and exercises. Threat working groups and assessment tools, such as the VAMP, play a critical role in these processes. In light of recent events these processes are receiving additional scrutiny. Although we cannot eliminate all vulnerabilities, we continue to use risk management when deciding missions in this theater in order to reduce risk to our personnel—identifying vulnerabilities and resources required to reduce exploitable FP vulnerabilities.

Our intelligence operations continually analyze and assess potential terrorist threats to U.S. installations, facilities and personnel. We use a variety of systems to disseminate intelligence within the command and provide routine and time-sen-

sitive threat warning notifications. Our systems and procedures provide the ability to rapidly disseminate information regarding specific terrorist threats to units, installations and individuals throughout the AOR. In conjunction with our national intelligence agencies, we are exploring better methods of sharing and disseminating more accurate AT/FP prediction and tracking threat information. Recently, we initiated closer cooperation with the U.S. Central Command to share and maximize our efforts, including assets, analytical and database capabilities.

While intelligence operations support for AT/FP in theater is good, we concur with the recent U.S.S. *Cole* Commission recommendation to reprioritize resources for collection and analysis, including human intelligence and signals intelligence, against terrorist threats, and to increase our national intelligence agencies counterintelligence resources dedicated to combating terrorism.

BALKANS

One of the greatest challenges to peace, stability, and democracy in Europe is the integration of the Balkans into the rest of Europe, a strategic objective the U.S. shares with NATO and the EU. Last year saw a watershed opportunity to overcoming that challenge—the toppling of Slobodan Milosevic and the election of Vojislav Kostunica as President of the Federal Republic of Yugoslavia (FRY). It has been clear for a decade that only a change from dictatorship to democracy in Belgrade would set the conditions for a regional approach to the problems in the Balkans. This transition from authoritarian to democratic rule in the FRY should have a beneficial impact on the integration of the entire region into the west. President Kostunica still has much work to do in consolidating democratic gains. While the FRY has begun its re-integration into the western world, rapidly joining the UN, the Organization for Security and Cooperation in Europe (OSCE), and the Stability Pact for Southeastern Europe, and establishing diplomatic relations with the U.S. and other key NATO allies, much remains to be done in the Balkans.

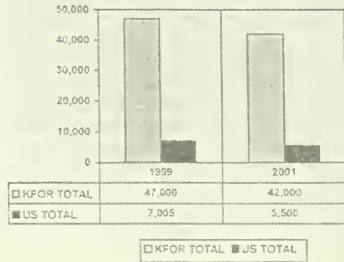
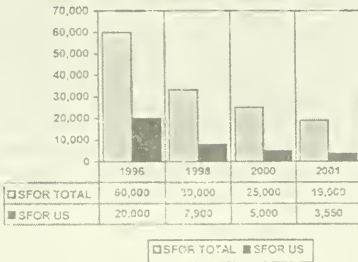
Greater ethnic reconciliation in Bosnia and Kosovo is elusive and while recent voting in Serbia and Bosnia marked another milestone in the rule of law and movement toward democracy, it also reinforced some hard-line nationalist parties and their platforms. Additionally, despite the first democratic elections in Kosovo, where municipal voting saw moderates win, the province is still volatile.

Security conditions permitting the withdrawal of U.S. troops from the region have not yet been fully realized. The status of Montenegro within the federation, a final settlement for Kosovo, and Serbia's future links with the Republika Srpska remain open issues whose resolution are required in order to bring stability and democracy to the Balkans. There is no short-term solution to the problems in the Balkans without developing a comprehensive, region wide, and long-term approach. The economics in the region are driving the turmoil and fractious nature of the "peace." International involvement in the Balkans must include substantive initiatives that address the economic problems of the region. Without such initiatives, we cannot hope to forecast peace.

Military forces, too, must continue to foster an environment in which peaceful actions are rewarded, but do it with fewer resources. This can be accomplished by leveraging existing national and allied exercises that occur across this theater and by executing them as much as possible in the Balkans. By conducting exercises in the Balkans, we show resolve in the regional policies, deter the outbreak of hostilities, and improve regional infrastructure leading to increased interaction among Balkan peoples.

In Bosnia, force numbers have been reduced from 60,000 when the mission began, to just over 20,000 personnel. Of 34 nations contributing forces to this effort, 28 are European and their forces make up 80 percent of SFOR. The U.S. has successfully reduced its proportion of committed troops from 33 percent in 1996 to 20 percent today. The way ahead in Bosnia, including future force reductions, remains contingent upon the implementation of Dayton's various military and civil tasks. We are working within the administration to address possible ways to implement the civil tasks and set the conditions for additional NATO force reductions.

The KFOR military effort is considerable and has not changed to any degree since last year. KFOR's strength remains at 37,000 deployed in Kosovo proper and an additional 4,400 supporting in the Former Yugoslav Republic of Macedonia (FYROM), Greece, and Albania. This force is drawn from 39 nations, with 33 European countries deploying over 80 percent of the total. The U.S., with 5,500 troops in Kosovo, continues to provide 14 percent of the force. Europe as a whole has endeavored to live up to its personnel and financial commitments of support to Bosnia and Kosovo. The following charts indicate their specific levels of military troop support:



The UN Mission in Kosovo (UNMIK) police force enjoys continued success. Current numbers indicate that 53 nations contribute 4,485 officers. This number represents 95 percent of the UN goal of 4,718 police officers. Additionally, the domestic police academy graduated its twelfth class on 3 February and has placed 3,128 multi-ethnic officers on the beat as a result. I can report the UN's policing plan is on target and the effort continues to put 300+ officer graduates on the street every month to work—and learn—alongside UNMIK's veteran contract officers.

U.S. contributions to NATO are based on the North Atlantic Treaty signed on 4 April 1949. The annual U.S. funding commitment is an obligation to cover approximately one-quarter of the NATO funding requirements as set by consensus of the Military Budget Committee composed of representatives from each of the participating nations. Once funding is committed, the prestige and credibility of the United States is irrefutable and must be met. Consequently, a failure to provide adequate funding to meet this commitment forces the DOD to reprogram funds from other established mission-essential programs. Shortfalls in NATO funding have been chronic in the past and have only served to erode national programs. I encourage Congress to realize that full funding of our NATO commitment will ensure the full execution and realization of national programs, as well as the continued security and stability of Europe as afforded by NATO.

In closing on the topic of the Balkans I do want to make one further comment, and that is in regards to the pursuit and eventual apprehension of Persons Indicted for War Crimes (PIFWCs). There are few higher priorities in the international community's efforts in the Balkans than bringing PIFWCs to justice regardless of what you might hear or read, but it is slow and dangerous work. American forces, working alongside their NATO counterparts, are fully committed and one day I am confident these indicted criminals will be delivered to the International Criminal Tribunal for the Former Yugoslavia (ICTY) at the Hague. To date approximately 100 have been indicted and 71 delivered to the ICTY, killed during apprehension efforts, or have otherwise died. This process will continue until such time as justice is satisfied.

OPERATION NORTHERN WATCH

The Combined Joint Task Force (CJTF) Operation Northern Watch, consisting of forces from the U.S., Turkey, and the United Kingdom, continue to fly dangerous and complex missions in the enforcement of the No-Fly Zone (NFZ) over Northern Iraq, and monitoring Iraqi compliance with applicable UN Security Council Resolutions.

In the last few months, however, the situation in the zone has been further complicated by a dramatic increase in the number of international "humanitarian flights" into Iraq, as well as the introduction of domestic Iraqi flights into the NFZ. Coalition forces have taken appropriate measures to ensure that civilian aircraft will not be endangered by ONW activities. There is no guarantee of what actions Saddam Hussein might initiate; however, he has altered his primary strategy from open defiance of ONW presence, to eroding international support for applicable UN resolutions.

RUSSIA

U.S. and Russian soldiers execute common missions side by side against common threats in the Balkans. Our deployed forces have performed ably together and have developed positive and extremely important combined training and operational activities. In spite of 5 years of operational cooperation and success however, our over-

all attempts to engage more broadly with Russia are mixed. Ideally, Russia will harmonize its security concerns with NATO, further strengthening stability in the region. A remilitarized or a failed Russia would lead to increased instability and danger not only to its neighbors, but to vital U.S. security interests as well. The U.S. supports favorable developments in Russia with its bilateral engagement efforts, as well as through its support for the stability, sovereignty, and economic development of the Ukraine, Moldova, and the Caucasus' states.

CAUCASUS

The Caucasus region is vitally important to the United States for at least two major reasons: the impact on the emerging Russian national self-definition, and its capacity to fulfill European hydrocarbon energy deficits. Despite its remoteness from the U.S., the region will have a decisive impact on international political developments in the early 21st century.

The importance of Caucasus oil and gas reserves, and the necessity of their supply to meet growing European energy needs, comes precisely at a time when Russia is still immersed in its yet to be completed social, political, and economic revolution. It also comes at a time when China is emerging as a major regional economic and political power, with vastly increased energy requirements. Despite this critical time, America has imposed on itself considerable constraints toward our policy and influence in this region.

A key constraint to full American peaceful engagement in this region is Section 907 of the 1992 Freedom Support Act. The Act prohibits government-to-government assistance to Azerbaijan until such time as "steps are taken" to lift the economic embargo sponsored by Azerbaijan against Armenia, with the exception of counter-proliferation programs. The DOD applies an "equal treatment" policy toward Armenia to avoid compromising the U.S. position as mediator in the Nagorno-Karabakh conflict. Other subsequent legislation has opened up several narrow "carve out" areas to Section 907 for military and other engagement activities: democratization; counter-proliferation; humanitarian demining operations; and humanitarian assistance. While these niches have allowed us to initiate preliminary military contacts with Armenia and Azerbaijan, they are extremely narrow and do not allow USEUCOM to respond to both nations' enthusiastic desire for substantive engagement activities.

Were it not for Section 907, Azerbaijan, based largely upon its geo-strategic position, pro-western economic, political, and military orientation, and its abundant energy resources, would be a very high priority for USEUCOM engagement efforts. A stable Azerbaijan is necessary not only for its vast energy deposits, but also to help forestall terrorism and the proliferation of weapons of mass destruction. U.S. policy has had the effect of frustrating Azerbaijan's pro-NATO policy and desires to expand its relationship with Europe and the U.S. I would ask you to take a hard look with the intent of modifying this legislation to afford the opportunity for our military to properly engage with our counterparts in this vitally important region of the world. Such an initiative would strengthen our ability to influence this region for the next generation and beyond.

Armenia has also persistently and vocally pursued at the highest levels closer ties to the U.S. Armenia's motivation lies in its eagerness to balance its historic dependence and partnership with Russia, enlist the U.S. to mitigate historically hostile relations with Turkey, and attract potential economic development assistance and investment that Russia has not been able to provide. In particular, Armenia has asked for our advice on establishing a program of instruction for a national military senior service college and for help in establishing peacekeeping units that could participate in international efforts such as the Balkans. Due to Section 907, however, these are opportunities USEUCOM cannot exploit and we are limited in our efforts to assist these nations in sorting out mutual problems and their futures.

Very briefly, our activity in the case of Georgia has continued to increase since being assigned to USEUCOM's area of responsibility 3 years ago. Georgia will host its first large multinational NATO Partnership for Peace exercise with USEUCOM support in 2001, providing a good example of the kind of engagement opportunities we are missing in Azerbaijan and Armenia.

AFRICA

Africa is a complex, diverse, and often dangerous region of the world. Its countries are evolving into clusters of stability and instability, leading in some areas to promising economic growth and democratic government, and in others to stagnation and autocratic rule. A few are simply chaotic due to coups, civil wars, widespread corruption, or lack of an effective government. While this dynamic mix of political

trends and institutions will continue for the foreseeable future, the administration seeks to bolster stability and democratic transformation through a policy of engaging with key partner states and regional "success stories." We who watch Africa closely anticipate fewer African "wars" but an ever-increasing scope of conflict as failed states and the emerging transnational threats and humanitarian crises provide the conditions for instability. Unstable political environments, austere conditions, and asymmetrical threats where the enemy is not clearly defined, either by uniform or position on the battlefield, will characterize the operating environments.

Small programs, such as our Humanitarian Assistance Program (HAP), are key engagement initiatives in Africa that satisfy both DOD and State Department objectives. Small dollar amounts have yielded big dividends in terms of the U.S. military impact in Africa. With approximately \$17 million for fiscal year 2001, USEUCOM will be able to complete more than 120 projects in roughly 50 African and Eurasian countries. Engagement through the African Center for Strategic Studies (ACSS), Near-East South Asian Center, African Crisis Response Initiative (ACRI), and the West African Training Cruise (WATC) are also helpful for promoting African stability. Joint Combined Engagement Training with African partners, in addition to giving our soldiers the chance to improve their capabilities to work in multiple environments, expose African soldiers to the U.S. military, challenging them to improve their professional skills. By leveraging the resources of programs such as these we seek to help shape the African environment in a positive way.

SUB-SAHARAN AFRICA

The portion of Sub-Saharan Africa in USEUCOM's area is an immense geographic area comprised of 37 countries and four primary sub-regions, each with significant environmental, cultural, political and economic differences. USEUCOM has identified its three principle objectives for military engagement in Sub-Saharan Africa: promote stability, democracy and a professional military; provide prompt response to humanitarian crisis; and ensure freedom of air and sea lines of communication. By applying resources against established objectives, the intent is to reinforce success and work to prevent crises before they occur. There are three critical issues preventing peace, stability, and economic development in the Sub-Saharan Africa region: the war in the Congo (DROC); the conflict in Sierra Leone; and the HIV/AIDS pandemic; all of which are unrestrained by boundaries or borders. Each is a contagion that threatens current and future stability throughout the continent.

With the assassination of President Laurent Kabila on 16 January 2001, the future situation in DROC is uncertain. Joseph Kabila, the late President's son, was sworn in as President on 26 January 2001. Within DROC there are military forces from six different nations participating in the conflict. The countries previously supporting the late President—Zimbabwe, Angola, and Namibia—have pledged continued support to the new government in its civil war. Additionally, the nine countries bordering DROC are significantly impacted socially and economically by the war to varying degrees. The sheer size, geographic location, vast mineral wealth, and economic potential in DROC guarantee that peace in the Congo is inextricably linked to stability throughout the region. The existing Lusaka Peace Accord is the best opportunity to resolve this conflict. President Joseph Kabila recently held a historic meeting with Rwandan President Paul Kagame in Washington in February where both sides pledged to renew efforts to implement the Lusaka Peace Accords. President Kabila also met with Secretary of State Colin Powell the same day. Within the limits of U.S. law and policy, U.S. European Command continues its limited engagement with all parties in an effort to demonstrate neutrality and urge support for the Accord and the UN Mission to the Congo.

The situation in coastal West Africa continues to smolder and destabilize the sub-region. While centered in Sierra Leone, this conflict also involves Liberia, Guinea, and Burkina Faso, as well as the sixteen other members, directly or indirectly, that comprise the Economic Community of West African States (ECOWAS). Through support of the UN's mission to Sierra Leone, support to British efforts, and training and equipping countries contributing to the ECOWAS Military Observers Group, USEUCOM works to contain the spread of this conflict, as well as create the conditions for future peace and stability in the region.

Sub-Saharan Africa is the region most heavily infected with HIV in the world. The region accounts for two out of every three of the world's HIV infections, and represents over 80 percent of global HIV/AIDS deaths. The prevalence of HIV in Sub-Saharan militaries varies greatly, but it generally exceeds that of the civilian populace. Many militaries have infection rates as high as 20 to 50 percent of the force. As African militaries participate not only in conflicts but also in peacekeeping and humanitarian relief operations outside their borders, HIV follows. We are com-

mitted to working with African militaries to contain the spread of HIV/AIDS through education, awareness, and behavior modification.

NORTH AFRICA

The strategy in North Africa is anchored by bilateral relationships with what USEUCOM sees as two cornerstone countries—Morocco and Tunisia. Recent developments in Algeria have also prompted measured engagement activities with that country. Complementing these bilateral relationships is a developing regional approach to engagement in North Africa and the Mediterranean.

There are three prime sources of tension in North Africa. The first is the Islamist insurgency in Algeria where the government's amnesty offers have persuaded moderate rebels to surrender, while security forces remain engaged in fighting hardliners. The behavior of both the military leadership and insurgents will be critical to the progress of political reform efforts and the environment for badly needed foreign investment. Complete restoration of civil order in the countryside will likely take years, and social tensions will exist long after the conflict. There is optimism, however, as it appears there is a general trend toward greater internal stability.

The second key source of tension is Libya—long a source for concern as its leader, Muammar Qadhafi, continues to pursue the development of weapons of mass destruction and associated delivery systems. Islamist opposition to Qadhafi has found limited popular support and has met with a strong effective response from Qadhafi's security forces.

The third source of tension is the unresolved dispute in the Western Sahara. The King of Morocco, Mohamed VI, has initiated a series of measures to make the administration of the territory more positive, but the UN-sponsored process to hold a referendum on the final status of the territory remains bogged down over disagreements about the voter list. At times, this confrontation contributes to dangerous tensions between Morocco and Algeria.

Africa will remain a challenging environment for the foreseeable future. USEUCOM will continue to pursue a program of active peacetime military engagement to shape the region and pursue our objectives with the aim of maintaining stability and preventing crises before they occur. Solutions to many of Africa's challenges are elusive, but USEUCOM is managing threats and capitalizing on opportunities where we can.

MODERNIZATION AND PERSONNEL ISSUES

Several modernization and personnel issues are being addressed at USEUCOM and I want to highlight some of those that Congress might positively influence and support.

ORGANIZATIONAL TRANSFORMATION BENEFITS TO USEUCOM

There is high probability that there will be repeated demands at the center of the spectrum of conflict, as well as the possibility of high intensity small-scale contingencies. Responding to this reality the Army has articulated a new vision for a strategically responsive and dominant force to effectively meet the full spectrum of future military operations. The Army's "Transformation" will occur in three phases, eventually resulting in the "Objective Force." The Objective Force aims to be able to send a brigade anywhere in the world in 96 hours, a division in 120 hours and five divisions in 30 days. The two divisions in Europe must also meet this standard by resourcing the training, exercises and infrastructure that support strategic mobility. Only through proper resourcing of our two divisions will this Objective Force be able to provide the deployability, maneuverability, and lethality necessary to conduct operations throughout the full spectrum of conflict.

Another key benefit for USEUCOM is the ability to rapidly move lighter vehicles between training areas and countries within this theater. As a potential force provider to other unified commands, most notably U.S. Central Command, future commanders will find that enhanced mobility of the Transformed Army also enhances deployability. The capability to deploy within a matter of hours to trouble spots in Africa and less developed countries of Eastern Europe offers a range of options that are simply unavailable today.

As the Army transforms it will reduce the logistics tail considerably. By operating from a single family of vehicles, significant efficiencies will follow. Much of the larger and more demanding logistics support activities will occur outside the operational area, reducing the logistics footprint.

Permanently stationed forces will be able to train effectively in the AOR, where many of the training activities of heavier forces will become increasingly problematic. Less noise and disruption of the local populations during movement to and

from major training areas (MTAs) make it more likely that permission will be granted for maneuver training off MTAs. This will allow the widely dispersed units of the V Corps to greatly expand maneuver training, at a much-reduced cost.

Similarly, the Air Force transition to the Expeditionary Air Force (EAF) concept has resulted in improved responsiveness in meeting the diverse needs of USEUCOM. Organized into multiple AEFs to support ongoing operations, Air Force personnel are now afforded predictable rotations. This new stability has improved morale, stabilized training, and assured necessary reconstitution time, thereby improving the combat readiness of all involved forces. USAFE forces are integral to the EAF. They provide, in addition to resident combat capability, the backbone that supports ongoing AEF operations over the Balkans and northern Iraq.

SPECIAL OPERATIONS FORCES

An invaluable tool for the effective implementation of our engagement programs is Special Operations Forces (SOF). These forces focus largely on their unique capability to organize and train indigenous forces in internal defense. By interacting with foreign military counterparts throughout the theater, SOF instills in host nation forces a sense of loyalty and professionalism that support democratic government and ideals. In the process, SOF gains valuable training and cultural experiences from these regional engagements. In fiscal year 2001, Special Operations Command, Europe (SOCEUR) has scheduled 101 JCET initiatives in 52 countries. Special Operations Forces become USEUCOM's force of choice for engaging on the fringes of the theater in uncertain environments to open new doors and to shape the battlespace in preparation for possible contingency operations.

RESERVE COMPONENTS

Total Force integration means conducting military operations that fully utilize the unique capabilities of the Reserve components (RC) of all Services. Reserve utilization requires a balanced and proportional approach that considers Service competencies and capabilities and matches those competencies to best support theater missions. The U.S. European Command's ability to undertake missions is growing increasingly dependent upon capabilities offered by the Reserves and the National Guard.

In an effort to ease active component operational tempo the Services are increasing their use of Reserves in contingency operations in the Balkans. The 49th Armored Division (Texas Army National Guard) successfully completed a rotation as the command element of Multi-National Division (North) in Bosnia last October. Their performance was superb and I want to take this opportunity to publicly applaud the great job they did last year. The Navy Reserve contributory support to this AOR for Operations Joint Guardian, Joint/Deliberate Forge and Northern Watch has included filling 89 percent (237,600 workdays) of all Navy billet requirements as of July 2000. The Air Reserve component provides 60 percent of the total KC-135 tanker aircraft needed for Operation Deliberate Forge providing air-refueling support to NATO aircraft flying missions over the Balkans. At the end of last fiscal year there were 1,244 Guard and 2,775 Reserve members on Active Duty in support of the two operations in the Balkans. The reality is SFOR and KFOR stability operations will continue to require augmentation from the Reserve community for the foreseeable future, especially in the area of civil-military operations and peace support operations.

Reserve components are an increasingly important asset for USEUCOM's operational activities, combined exercises, training, combined education, humanitarian assistance, and security assistance efforts. Reserve support to the theater, however, is not limitless. There are constraints that require a deliberate and well-thought-out balance of Reserve force functions in the total equation of requirements. The requirements of employers and families demand advance notice of deployment and training. Reserve Service members require predictability in order to manage business and personal affairs. Accessibility and volunteerism are factors that require reasonable lead-time to match and mobilize assets to the mission.

The PERSTEMPO management legislation enacted in the fiscal year 2000 National Defense Authorization Act will help provide standards and limits for all Service member deployments. While PERSTEMPO management provides stability and predictability for the Service member, it may increase personnel turbulence and cost due to an increased frequency of personnel rotations. Anecdotal evidence has suggested that increasing use of the RC has a negative impact on Service members' personal lives and may affect recruiting and retention goals.

COMBAT AIRCRAFT MODERNIZATION

To a large degree tactical aviation has shouldered much of the Nation's foreign policy when that policy called for the use of force. A decade ago Operation Desert Storm commenced with an unprecedented air assault against Iraq's military forces involving hundreds of U.S. aircraft flying tens of thousands of sorties around the clock. Since that time American aviators and aircraft have maintained the NFZ over Iraq, and since Operation Northern Watch was established have flown nearly 13,000 fighter sorties alone. More recently we have seen the use of our strike assets over the Balkans to stop the killing in Bosnia and to compel Milosevic to withdraw Yugoslav forces from Kosovo during Operation Allied Force. The demands of modern warfare for precision strike to maximize combat effectiveness while minimizing collateral damage clearly demonstrate the increased need for all-weather/all-target capability. The fact of the matter is, however, many of our tactical aircraft—F-18s, F-15s, F-16s, AV-8s, and A-10s—are aging and nearing the end of their service lives. Even the F-117 "Stealth Fighter," thought by most to be a new system, has an average age of 9.7 years and relies on dated technology. Currently, possible replacements—the F-22, Joint Strike Fighter, and F-18E/F—continue in development and are likely part of the administration's defense review.

AIRLIFT MODERNIZATION

Systems modifications are required to keep our airlift aircraft viable, particularly for USEUCOM's fleet of C-130s. These airplanes, now approaching 30 years of age, are essential to the success of several USEUCOM mission areas. From support of USEUCOM army units, including combat airdrop and resupply, to execution of humanitarian relief operations, these aircraft are a critical ingredient in maintaining a force projection capability in both combat and during peacetime. It is almost a certainty that the missions and roles this aircraft fulfills will only be more crucial in the future.

AIR TRAFFIC CONTROL

The tremendous growth in air traffic and communication industries in Europe presents increasing challenges for air traffic control agencies, civil air carriers, and military aviation. Just as in the United States, the European air traffic system requires significant improvements to increase capacity and reduce delays. At the same time, expansion of communication technologies is pressuring a limited radio frequency spectrum. To address these challenges, European countries are mandating more efficient air traffic communications systems and avionics. The U.S. has many similar plans; however, Europe is leading worldwide implementation due to its current frequency and air traffic congestion. We have no choice but to equip our aircraft for flight in the airspaces of Europe as well as the rest of the world to allow access to perform our mission.

INTELLIGENCE AND COMMUNICATIONS INFRASTRUCTURE

For the past several years, we have been living in a new operational environment for both conventional and support operations as technological advances change the way our potential adversaries and the U.S. military operate. At the same time, military forces have become the spearhead for several nation-building efforts. To meet these challenges, our intelligence collection and analytical efforts must constantly adapt to keep pace with the evolving intelligence demands associated with these new mission areas. Potential asymmetric attacks, including WMD, terrorism and information operations, may be directed not only at our deployed forces, but also at our critical infrastructures.

INTELLIGENCE SUPPORT TO USEUCOM

National agency support, including overhead collection, analysis and reporting, is critical to supporting our operational forces and engagement strategies. While we continue to revalidate our commanders' intelligence requirements and economize our requirements on these national resources, there is no theater capability to complement national collection support.

Defense Intelligence Agency (DIA) capabilities are critical to meeting USEUCOM intelligence needs. In particular, the contributions of the Defense Attaché System provide first-hand insights into the military-to-military relations in each country and timely reporting on crisis situations. The initiative to expand Defense Attaché Office presence in Africa is important to our engagement programs. In addition, DIA is leading a defense intelligence community effort to meet future challenges. This effort includes improvements to the database to enhance future targeting capabili-

ties, increased interoperability between national levels and tactical commanders, and an emphasis on new threats such as WMD and terrorism. The most significant of these is the emphasis on the workforce to ensure the intelligence workforce is capable of meeting these and other threats now and in the future. I am confident these initiatives will shape and improve defense intelligence support for the warfighter.

USEUCOM relies heavily on National Security Agency (NSA) products and services. The actions undertaken by the Director of the NSA to transform the agency into an organization that will successfully respond to future threats of the Information Age are critical to ensuring the safety of our forces. Funding support for NSA's efforts will help mitigate trade-offs during NSA's transformation process, while ensuring the timely deployment of capabilities needed to exploit and defeat modern adversaries. Such funding will have the added benefit of meeting USEUCOM's needs now, and into the rapidly evolving future.

The National Imagery and Mapping Agency (NIMA) provides critical imagery intelligence (IMINT) and geospatial information support and has repeatedly demonstrated its responsiveness to USEUCOM crisis operations. The need to precisely engage targets while minimizing collateral damage requires accurate and timely spatial and temporal intelligence. NIMA initiatives to develop a global geospatial foundation are critical in achieving our operational and engagement objectives. Additionally, NIMA's efforts to provide a critical IMINT tasking, processing, exploitation, and dissemination (TPED) system are crucial in fully realizing the benefits of our next generation imaging satellites. The recent congressionally-directed NIMA Commission, however, concluded TPED is under-resourced overall, and the U.S. cannot expect to fully realize the promise of the next generation of IMINT satellites unless NIMA TPED is adequately funded.

INFORMATION DOMINANCE

In conducting our missions and executing our responsibilities, USEUCOM commanders have an indispensable edge: We enjoy "information dominance" that comes from the interaction of superior intelligence and information infrastructures. However, that edge is perishable and is constantly threatened. The section addresses our health in both.

COMMAND, CONTROL, COMMUNICATIONS, AND COMPUTER SYSTEMS INFRASTRUCTURE

Europe's Command, Control, Communications, and Computer Systems (C⁴) infrastructure needs improvement to be able to handle a major crisis. Many USEUCOM networks were built in the 1940s and 1950s to support low-bandwidth voice service, and are simply inadequate for evolving high bandwidth demands, such as worldwide command and control video conferences, live Unmanned Aerial Vehicle (UAV) video feeds, electronic tasking orders for our air and land forces, theater-wide situational awareness, and full implementation of DOD's Global Combat Command and Control and Global Combat Support Systems. These systems are the foundation of USEUCOM's command and control capabilities.

The theater's World War II-era infrastructures suffer weather-related degradation in copper cables still insulated with wrapped paper. Increased network loads and failure of critical components cause unacceptable system delays and outages. Many naval sites in particular are unable to meet the minimum requirements for the Navy/Marine Corps Intranet—their primary information service network. Furthermore, current infrastructure does not support Information Assurance (IA) measures, potentially allowing our collection, analysis, dissemination, and command and control functions to be jeopardized by hostile or inadvertent interference.

We depend upon information services and network-centric command and control to enable smaller forward deployments, rapidly deployable joint task forces and task force component commands, shorter decision times, and improved force protection capabilities. This reliance makes targeting our networks an attractive option for adversaries unable to field conventional forces against us, and makes IA an absolute must if we are to maintain information superiority, and the integrity of our command and control.

USEUCOM's satellite communications lack flexibility, and capacity is extremely limited. In the event of a major crisis in Southwest Asia, nearly all of our mission-essential communications could be preempted by the surge in bandwidth requirements from U.S. Central Command. Realistically, this infrastructure needs to be replaced with modern high-bandwidth capability, preferably within the next 5 to 7 years—a significant investment, but one that we can't afford not to make.

OTHER AREAS FOR INVESTMENT AND IMPROVEMENT

Recent process improvements have enhanced coordination and prioritization of scarce intelligence, surveillance, and reconnaissance (ISR) resources across numerous worldwide requirements. However, airborne collectors remain a "low density—high demand" asset. Our ability to penetrate denied and high-risk airspace is critical to deliver the real-time threat awareness to deployed forces in places like the Balkans, Northern Iraq, and the Levant. We need to ensure the development of these capabilities, including long dwell UAVs with both imagery and signals collection capabilities, stays on track in order to deliver necessary warning and force protection in threatening and uncertain environments.

RESOURCES

America's most precious military resource, servicemembers and their families, are our number one combat multiplier. The well-being of the family is one of our top theater priorities, and is inextricably linked to readiness, retention, and reinforcement of core values, healthy family life, high morale, and mission accomplishment.

QUALITY OF LIFE

The quality of our housing, medical care, schools, religious services, public facilities, community services, and recreation activities in Europe should reflect the American standard of living—a value we have all pledged to defend. Our most important fiscal year 2000 Quality of Life (QOL) objective was to analyze and quantify the impact QOL has on readiness and retention. We took "expert testimony" from senior enlisted advisors and family members across the theater. Their conclusions paralleled previous evaluations, with family housing and barracks, spouse employment, childcare and health care, dependent education, and now the work environment consistently identified as lagging the farthest behind.

MILITARY INFRASTRUCTURE

We have seen many positive results from increased congressional funding last year and we all applaud and are thankful for congressional efforts to ensure the readiness of our forward deployed forces and families. Of particular note, the recently added \$25 million provided to the Army in Europe to plan and design their "Efficient Basing Initiative" is greatly appreciated, and will prove important as we work to revitalize our existing infrastructure. However, there is still a substantial amount of work to do to adequately provide for our servicemembers, civilians, and family members who deserve quality housing, workplace, and community facilities.

Housing, both unaccompanied and family, has improved continuously for the last 3 years and the outlook is promising. The elimination of gang latrines and the renovation of the barracks and dormitories to DOD's 1+1 standard has been a major morale booster for our troops and our components are on track to meet the Defense Planning Guidance (DPG) requirement for fiscal year 2008. Military family housing throughout Europe as a whole remains old, however, and is well below contemporary standards, and in need of extensive repairs and modernization. Although our housing programs in Europe are generally on track to meet DPG requirements for fiscal year 2010, for the Air Force alone, military housing construction allocations of over \$100 million per year for the next decade will be required to achieve minimum housing requirements. Quality housing for military members and their families continues to be a critical element in attracting and retaining the high caliber personnel who make our military forces the best in the world.

With trends in housing and barracks positive, it is now essential to focus our attention on the quality of the infrastructure of our communities and work facilities in Europe. Sustaining, restoring, and modernizing facilities are critical to properly supporting the military mission within the theater. From runways for our aircraft to the work place for our troops, the infrastructure support for our operations and people has weakened over time. This failing infrastructure is due to almost a decade of placing MILCON and Real Property Maintenance funding at a lower priority than other needs. Significant investments need to be made over the next decade to enhance our warfighter's support infrastructure and demonstrate to our people that they are indeed our most valuable resource.

USEUCOM is aggressively using all available funding sources, including the NATO Security Investment Program, Residual Value, Payment-in-Kind, and any additional funds provided by Congress, such as last year's Kosovo MILCON Supplemental Appropriation, to help reduce costs and meet escalating requirements. Additionally, some European base closures and consolidations will reduce future costs, enhance readiness, and increase effectiveness. Current ongoing efforts include the

Army's proposed relocation of an entire brigade combat team currently spread across more than 13 sites, to the Grafenwoehr/Vilseck, Germany area. This consolidation will significantly improve command and control, enhance training opportunities and vastly improve quality of life for the troops and family members—while saving approximately \$40 million per year in infrastructure costs.

With our continuing resolve to reduce the footprint while maintaining presence in our AOR, recapitalization has also become a critical issue. Progress is ongoing with the Naples Improvement Initiative nearly completed and construction efforts at Naval Air Station (NAS) Sigonella about to commence. These efforts will provide a significant improvement in both quality of life and service for sailors stationed in the European Southern Region.

These and other initiatives are essential for posturing our forces to better perform their missions, both now and in the future. In the meantime, we will continue to endeavor to help ourselves first and work every opportunity for internal efficiencies through consolidation, privatization, and ensuring maximum benefit from available funding.

DEPENDENT EDUCATION

With over half of USEUCOM servicemembers supporting families with children in school, the quality of DOD's dependent education programs ranks very high in determining QOL for our civilian personnel and servicemembers. As with many of our other QOL programs, lack of adequate infrastructure funding is the top concern. Since many of our schools are remote, program-based staffing is critical to provide a full range of educational opportunity for all students in music, art, and associated after school activities. We must take aggressive action to expand vocational, technical and school-to-work opportunities for our students. Finally, we must work toward establishing an 18:1 student-teacher ratio for kindergarten and to provide a Talented and Gifted program for middle schools similar to what is currently available at our high schools.

CONCLUSION

The U.S. European Command, which I am proud and honored to command, is executing new and exciting missions everyday, while successfully maintaining its warfighting edge. USEUCOM has also been active and has indeed expanded its engagement efforts, working to influence the military evolution of NATO, PfP, and emerging European defense structures. Finally, USEUCOM has seized new opportunities involving Russia, the Caucasus, and Africa, and will continue to seek new openings to expand our relationships.

Although our current posture is favorable and capable of meeting our national security interests, our infrastructure in particular is in need of upgrade and replenishment. Generally, significant increases in funding are necessary to maintain our readiness, continue current engagement efforts, and make the necessary investments to sustain our quality of life.

Without bipartisan congressional support, USEUCOM would not have been able to realize the achievements accomplished over the past year. On behalf of all personnel in the USEUCOM theater, I want to thank the committee for its support.

Chairman WARNER. Thank you very much, General Ralston.
General Franks.

STATEMENT OF GEN. TOMMY R. FRANKS, USA, COMMANDER IN CHIEF, U.S. CENTRAL COMMAND

General FRANKS. Mr. Chairman, first of all let me reinforce the point that you made earlier when you talked about the quality of the young people that we have serving today in the Army, Navy, Air Force, Marines, our Special Operating Forces, our Coast Guard. In fact, they are the best that we have had, and that brings to my mind the fact that what I would like to do with the committee is express on the record our condolences in Central Command to the families and the loved ones of those young people who were lost last week in that training accident on the Udairi Range at Observation Post 10 in the state of Kuwait. Five Americans and a New Zealand Army officer were killed in this tragic accident, while they

were in the performance of duties designed to increase the stability in a region that is inherently unstable.

It reminds me of the fact that ours is a dangerous profession, and these young people do in fact go in harm's way as they do the mission. All of us are in their debt, and in Central Command we join friends and allies in saluting the courage and the patriotism, commitment, and sacrifice of these young people.

Additionally, I would like to thank the Government of Kuwait, as well as others in the region, for the magnificent support that they provided with respect to this accident.

Mr. Chairman, I appreciate the opportunity to appear today before the committee to have an opportunity to talk about the central region, an area of vital importance to the United States of America, and what our activities are all about, what our interactions are, what are difficulties are, and what our needs are.

As this committee certainly knows, in this region on a given day will be between 18,500 and perhaps as high as 25,000 American personnel. Today we stand at a bit over 21,000 Americans deployed in the region, 175 to 200 airframes involved in our operations there, and generally between 25 and 30 ships with a carrier battle group in the Northern Arabian Gulf.

This region, as the committee knows, includes 25 countries, in an area about twice the size of the continental United States. Our forces around the clock, 365 days a year, are involved in enforcement of the no-fly zone in Southern Iraq, a security zone that extends from south to north, that being from the Kuwait or Saudi border up to the 33rd parallel about 180 nautical miles, and our sailors, and marines, additionally serve in Marine Expeditionary Units as they are in the region about 6 months of each year interacting with forces there.

Our maritime forces include, as I mentioned, a carrier battle group involved in maritime interception operations to ensure that the regime in Iraq is not afforded the unrestricted opportunity to smuggle gas oil using maritime routes in order to enhance Saddam Hussein's disposable income, which he has provided every evidence he will use to enhance his military position by building up and modernizing his conventional forces, his integrated air defense systems, as well as his weapons of mass destruction program.

These people who serve in the central region are doing this every day, and I mentioned to the committee, Mr. Chairman, they do, in fact, go in harm's way. Witness the Khobar Towers incident, or witness the bombing of the Saudi Arabian National Guard facility several years ago, witness 12 October this past year, where 17 Americans, 17 sailors lost their lives in the Port of Aden in a terrorist incident.

We ask a lot of these young people, we expect a lot of these young people, we owe them what we seek in Central Command, in fact all the military services to provide, and that is the appropriate balance of our resource levels to ensure appropriate force protection, to ensure appropriate policy-level decisions, to provide the benefit of experience from within the region to the policy level, as the policies are being formed by this administration, to ensure that we do the best things we can to work toward the assurance of

maintaining access to this region of vital and enduring interest to the country.

Mr. Chairman, I have asked that my prepared remarks be included in the record, and at this point I will stop the oral remarks and be pleased to entertain the committee's questions.

[The prepared statement of General Franks follows:]

PREPARED STATEMENT BY GEN. TOMMY R. FRANKS, USA

INTRODUCTION

Mr. Chairman, members of the committee.

U.S. Central Command's (USCENTCOM) Area of Responsibility (AOR) includes 25 nations, extending from Egypt and Jordan to the Horn of Africa, the Arabian Peninsula, Pakistan in South Asia, and Central Asian states as far north as Kazakhstan. Included are the waters of the Red Sea, the Northern Indian Ocean, and the Persian Gulf, with maritime chokepoints of the Suez Canal, the Bab el Mandeb, and the Strait of Hormuz.

The current National Security Strategy specifies that our core objectives in this vital region are to enhance U.S. security, promote democracy and human rights, and bolster American economic prosperity. To meet these goals, USCENTCOM promotes regional stability, ensures uninterrupted access to resources and markets, maintains freedom of navigation, protects U.S. citizens and property, and promotes the security of regional friends and allies.

As we work with policymakers to define USCENTCOM's approach in the AOR, we address our objectives and goals in light of the political-military dynamics of the region. The Middle East Peace Negotiations (MEPN) and U.S. relationships with Israel, Lebanon, Syria, and Turkey influence our relations with Egypt, Jordan, and the states of the Gulf Cooperation Council (GCC). Pakistan is important to the U.S. because of regional tensions and its proximity and relationship to Afghanistan. U.S.-Pakistan relations continue to be influenced by these issues and by progress toward a return to civil, democratic government. Transnational issues including humanitarian disasters, refugees, international crime, drug smuggling and terrorism, and state-to-state conflicts such as the Eritrea-Ethiopia War, will continue to define our tasks in the Horn of Africa. Our relations with the Central Asian states will be influenced by their relationships with Russia, their concern about extremism generated from Afghanistan, and our efforts and commitments to help the Central Asian states in maintaining their independence, sovereignty, and territorial integrity through democratic and defense reform.

Natural resource distribution will continue to influence regional dynamics. Control of water sources and uses downstream may heighten existing international tensions, particularly along the Nile, Tigris, Euphrates, and Jordan Rivers. Competing claims over the control and distribution of energy resources will continue to influence relations between states, particularly around the Caspian Sea.

On a given day, USCENTCOM operates in the region with some 30 naval vessels, 175-200 military aircraft, and between 18,000 and 25,000 soldiers, sailors, airmen, coast guardsmen, and marines. Activities range from missions such as Operation Southern Watch enforcement of the No-Fly Zone (NFZ) over Southern Iraq, to Maritime Intercept Operations (MIO) in the northern Persian Gulf, to Security Assistance, to International Military Education and Training (IMET), to Joint and Combined Exercises, and Humanitarian Demining (HD). Our military men and women continue to do a remarkable job across the board in enhancing U.S. relationships in the region, in promoting stability, and in supporting diplomatic efforts aimed at securing America's vital and enduring national interests.

There is, however, a price for America's visibility in pursuit of our interests. Some, opposed to the values for which our country stands, have determined to take direct and violent action against our presence in the region. The terrorist bombing of the Office of Program Management for the Saudi Arabian National Guard (OPM SANG), the Khobar Towers bombing, the attacks on our embassies in Kenya and Tanzania and last October's attack on U.S.S. *Cole* continue to demonstrate that our opponents are dedicated, determined, and resourceful. Our clear task is to remain resolutely committed to the principles we stand for while we provide the best possible protection for our people. Efforts to counter the terrorist threat are ongoing, but much remains to be done as our men and women in uniform daily go "in harm's way."

I will now describe our AOR in greater detail, highlight our ongoing challenges and opportunities, and identify our essential requirements.

Overview

The Central Region is of vital interest to the United States. Sixty-eight percent of the world's proven oil reserves are found in the Gulf Region and 43 percent of the world's petroleum exports pass through the Strait of Hormuz. The developing energy sector of the Central Asian states, with the potential for discovery of additional oil reserves, further emphasizes the importance of the Central Region to America and the world.

The words that best describe the AOR are "diversity" and "volatility." The region is home to more than 500 million people, three of the world's major religions, at least 18 major ethnic groups, and national economies that produce annual per capita incomes varying from a few hundred dollars to tens of thousands of dollars.

Portions of USCENCOM's AOR are characterized by instability. We find social volatility due to pressures created as governments transition toward democracy, and we find additional social, economic and military stresses from humanitarian crises, the strains of resource depletion or overuse, religious or ethnic conflict, and military power imbalances. While national instability is not uncommon, the volatility of USCENCOM's AOR is particularly significant because of its geographical and economic importance. The natural resources of Saudi Arabia, Kuwait and others have provided extraordinary opportunities for these nations, but also have given rise to a range of socio-economic problems and rivalries. States such as Egypt and Jordan have compensated to a large extent for their lack of mineral wealth through positive use of their human resources. Yet, there are nations in the region that have not generated the will, resources, or organization to move ahead. These factors will not be easily overcome, and portend potential regional challenges for the future.

Iraq

Ten years ago, American leadership produced a coalition that defeated Saddam Hussein's invasion of Kuwait. Despite victory, we remain engaged in current operations in the Gulf because of Iraq's refusal to abide by the terms of a series of United Nations Security Council Resolutions (UNSCRs).

In the past year, coalition forces flew more than 19,000 sorties in support of Operation Southern Watch (enforcement of the Southern Iraq NFZ), with almost 10,000 of those sorties in Iraqi airspace. The purpose of these missions in support of United Nations (UN) resolutions remains the protection of Iraqi civilians (Kurds in the north/Shia in the south) from Saddam Hussein and the prevention of Iraqi aggression against its neighbors. Our forces have been engaged by surface-to-air missiles or anti-aircraft fire more than 500 times during the period, and coalition forces have responded to these provocations on 38 occasions. Enforcement of the NFZ will remain dangerous but necessary business as long as the Iraqi regime continues to threaten its neighbors and its own people. Similarly, our naval forces maintain continuous presence in the Persian Gulf, and have intercepted 610 ships in the past year in support of MIO, enforcing UN sanctions designed to limit Saddam Hussein's ability to smuggle oil out of Iraq. Iraqi oil smuggling provides uncontrolled revenues, which could be used to reconstitute his weapons of mass destruction (WMD) and rebuild his conventional forces. Sixty-five of these ships have been diverted to Gulf coalition partners where contraband oil has been confiscated and sold. Again, necessary but dangerous business.

As allied forces continue to enforce the resolutions, Iraq has become more aggressive in attempts to circumvent them. As the second-largest producer of oil after Saudi Arabia, Iraq has attempted to manipulate the UN Oil-for-Food (O-F-F) program. Because of Saddam's obstruction, not all revenues and supplies intended for the direct relief of the Iraqi people under the O-F-F program have found their way to the population. Additionally, by halting and restarting crude oil exports of up to 2.3 million barrels per day, Iraq has attempted to establish leverage that it can use to end sanctions. Saddam's ability to circumvent UN sanctions leaves little incentive for him to accept UNSCR 1284 or permit the resumption of UN inspections. In the absence of inspectors and a long-term monitoring program, we cannot verify that Iraq is not continuing research, development and production of WMD and ballistic missiles.

Despite the overwhelming defeat of Iraq's conventional military force, it remains a threat to its neighbors and has repeatedly demonstrated an ability to project force as evidenced by significant deployments to western Iraq in October and November/December 2000. Iraq continues to challenge coalition aircraft in the NFZs despite the effects of 10 years of sanctions on its air force and continued attrition of its air defense forces. Despite the degradation of Iraq's military capability, our regional

partners do not yet possess the capability to deter Iraqi aggression without our assistance.

Saddam is as secure now as at any time in the past decade. Iraqi participation in the 21–22 October 2000 Arab Summit and the 12–13 November 2000 Organization of Islamic Conference (OIC) signals his attempt to reenter the Arab fold, and renewed contacts between Baghdad and a number of moderate Arab countries following the breakdown of the MEPN make the U.S. leadership role critical as we work to rebuild the Gulf War coalition. USCENTCOM operations and military-to-military relationships remain key to this effort.

IRAN

Iran's future is an enigma in the question of stability in the AOR. Since 1997, President Khatami has attempted to change the image of Iran by initiating diplomatic rapprochement with Europe and the Gulf States. Domestically, moderate legislators have the majority in the parliament and have attempted to reform the system by introducing greater transparency and accountability within government. However, conservative hard-liners have closed Iran's free press, blocked reform legislation, and intimidated and jailed moderate legislators and popular figures, effectively maintaining an atmosphere of social and political repression.

Iran faces severe internal challenges including domestic political and economic problems, massive unemployment, and increasing drug use. While a majority of Iranians, especially the young, demand change, they find themselves virtually powerless. President Khatami has not succeeded in changing the system while Supreme Leader Khamenei and the ruling conservatives have clearly demonstrated that they will not accept change, nor will they share the principal elements of state power with an increasingly restless population.

Meanwhile, Iran continues to improve its conventional and unconventional military capabilities. Tehran's ability to interdict the Strait of Hormuz with air, surface, and sub-surface naval units, as well as mines and missiles remains a concern. Additionally, Iran's asymmetrical capabilities are becoming more robust. These include high speed, fast attack patrol ships; anti-ship missiles; unmanned aerial vehicles (UAVs); and hardened facilities for surface-to-surface missiles and command and control. WMD programs and the Shahab-3/4 Medium Range Ballistic Missile (MRBM) also continue to receive priority funding. Although President Khatami is attempting to change Iran's image, sustained hostility of conservative hard-liners is evident as we see continued support of terrorism aimed at derailing efforts for peace between Israel and the Palestinians.

As Tehran deals with the stresses of a growing and increasingly discouraged population, internal political volatility could result in diplomatic, military, or asymmetric attacks on Iran's neighbors or American citizens and our interests. If we factor Iran's burgeoning WMD capability into this equation, the risks increase significantly and Iran becomes the greatest long-term threat in our AOR.

Gulf States

Increased revenues from high oil prices have benefited Gulf oil producers. This financial shot in the arm has reduced budget deficits and reactivated previously stalled infrastructure projects. However, socio-economic problems, such as increasing population, high unemployment, declining public services, and a depressed worldwide financial market, have focused the nations on the Arabian Peninsula on economic reforms that are intended to diversify and stimulate their economies.

Regional stability was recently enhanced through the resolution of long-standing Saudi-Yemeni border and Kuwaiti-Saudi maritime boundary disputes. But, unresolved United Arab Emirates (UAE)-Iran and Bahrain-Qatar territorial disputes, and Kuwait-Iran maritime boundary disputes remain.

The ongoing Israeli-Palestinian violence is of continuing concern in the Gulf region. This violence has increased internal pressures on moderate Arab governments who must balance responses to public opinion with the value placed on their relationships with the West. If the Peninsula states begin to distance themselves from the U.S., their inability to face the dual threats of Iran and Iraq will leave them vulnerable to intimidation by these aggressive powers.

Northern Red Sea

The Northern Red Sea sub-region (Egypt and Jordan) is on the front lines of the MEPN and has the most to gain or lose from the process. Peace would usher in the prospect of economic development, a stable financial environment, and social stability. Continued conflict encourages extremism, deters economic investment from outside the region, and inhibits tourism, a major source of income in both Egypt and Jordan. President Mubarak of Egypt and King Abdullah of Jordan have walked a

fine line on the issue despite domestic difficulties, calls for breaking diplomatic relations with Israel, and for boycotts of Israeli and U.S. goods.

Economically, Egypt's move toward privatization is hampered by concerns about unemployment and the expected economic downturn that would initially follow. As Egypt's major source of hard currency is tourism, its economy reacts dramatically to advances or setbacks in MEPN.

Jordan suffers from water shortages, high unemployment, deficit spending, and a stagnant economy hampered by sanctions imposed on Iraq, Jordan's largest trading partner and its sole supplier of oil. Jordan's economic prospects are limited by the region's instability, magnified by the fact that 60 percent of the population of Jordan is Palestinian. King Abdullah has managed to support the Palestinian cause while maintaining ties with Israel, and dealing with the economic impact of sharing borders with Syria and Iraq.

Central and South Asia

Central Asia's primary security concern is the threat posed by religious extremism generated from the continuing conflict in Afghanistan. In response to the Islamic Movement of Uzbekistan (IMU) incursion in 1999, Uzbekistan and Kyrgyzstan began developing new tactics and deployed military forces to critical defensive corridors in anticipation of renewed IMU activity. Consequently, and due to increased logistical and training support provided by the U.S., Turkey, Russia, and China, Uzbekistan and Kyrgyzstan anticipated and effectively countered IMU infiltration into their territory in the summer and fall of 2000. But these countries, and the Central Asia region as a whole, will remain vulnerable to renewed IMU attacks in the coming spring and summer. USCENTCOM will continue to work with the militaries in Central Asia to enhance their abilities to secure their borders, build multilateral relationships through exercises, and support diplomatic efforts to enhance stability and nurture democracy.

Pakistan remains key to achieving stability in South and Central Asia. Peace initiatives instituted by Pakistan and India have the potential to develop into meaningful dialogue and dramatically reduce tensions in the region, but both these nuclear states require encouragement to move forward. Pakistan perceives U.S. policy as "tilting" in favor of India, which complicates dialogue on the subcontinent. This perception is fueled by our limited military-to-military interaction with Pakistan coupled with the current moratorium on International Military Education and Training (IMET). Historically, the Pakistani military is one of the most influential forces within the country and USCENTCOM's relationships at the military level could create leverage to enhance stability in South Asia.

Afghanistan remains a destabilizing influence in the region. In one way or another, all of Afghanistan's neighbors are affected by Afghanistan's internal war—either as a supporter of one side or the other, or by proximity to the chaos generated by the war.

The military, economic and social stresses brought on by the Afghan conflict and the continuing tension between India and Pakistan impact each of the Central Asian governments and regional economies as well, and have prompted the Central Asian states to look for increased collective security opportunities. USCENTCOM has effective mil-to-mil programs with Kazakhstan, Uzbekistan, and Kyrgyzstan, and is interested in beginning engagement with Tajikistan, a country key to the region because of its geostrategic location and close ties to Russia. Tajikistan has submitted paperwork to join the Partnership for Peace program, and the Department of State is actively working to obtain Cooperative Threat Reduction certification and IMET funding to support their request.

Africa

The 2½-year war between Ethiopia and Eritrea appears to have ended with the 12 December 2000 peace agreement. With the deployment of the United Nations Mission to Ethiopia and Eritrea (UNMEE), both countries have promised to uphold the principles of the peace agreement. As long as UN peacekeepers are present, renewed fighting is not expected. As these states implement the peace agreement, we will reopen military contacts and seek to build on relationships that provide balance and enhance regional stability.

Other countries in the Horn of Africa are still suffering from the impact of a 5-year drought that places 20 million in need of aid, about 10 million of whom are facing starvation. Despite donor fatigue, aid agencies remain responsive to this humanitarian disaster, and USCENTCOM will continue to assist with humanitarian programs in every way possible.

Sudan continues to provide support and safe haven to transnational terrorists and opposition groups. President Bashir has been unable to end the civil war in south-

ern Sudan, and factional fighting has caused the UN and other relief agencies to periodically suspend relief efforts.

Despite Djiboutian efforts to revive a national Somali government, there is little prospect that Somalia will emerge as a coherent state in the near future. Djibouti itself will continue to face challenges as it struggles to deal with its own economic, political and social problems.

Despite the continuing drought-induced humanitarian crisis described above, economic stagnation, and political turmoil, Kenya remains key to stability in East Africa and is an important friend for the United States. Kenya's apolitical Army remains a source of stability that will be important as Kenyans go to the polls in 2002 to elect their first new president in 23 years. The African Crisis Response Initiative (ACRI) will help that Army build capacity to respond to Kenya's needs.

Terrorism

The threat of terrorist activity remains high throughout the Central Region. Events such as the attack on U.S.S. *Cole* serve as constant reminders of this fact. Despite our counterterrorism successes over the past year, including the disruption of terrorist cells in Jordan and Kuwait, extremist groups continue to recruit, train, and conduct operations. One evolving trend that has helped terrorist organizations rebound from our counterterrorism successes is unprecedented cooperation between known and obscure groups. This cooperation includes moving people and materials, providing safe-havens and money, and training new recruits. The trend is especially disturbing as known organizations gain plausible deniability for operations, while the obscure groups achieve an increased capability from training and financial support.

Terrorists' persistent interest in larger devices, more lethal tactics, and unconventional (chemical, biological, radiological, and nuclear) weapons points to an even more significant problem in the future. In addition to the use of unconventional weapons, the potential for terrorists to regard unconventional targets (civilians and civilian infrastructure) as practical options for attack seems likely. As terrorist networks improve their ability to operate within the global communications environment, we see increased capability to support recruitment, conduct fund-raising, and direct sub-elements worldwide. The complex terrorist threat we face today is less predictable and potentially much more dangerous than we have seen in the past.

Proliferation of WMD

Russia, China and North Korea remain the primary external suppliers of WMD and missile-related technology to countries in the AOR, and some regional states with maturing WMD programs have joined the ranks of potential suppliers. As proliferation in the Central Region accelerates, coalition partners feel mounting pressure to offset the WMD threat with comparable weapons of their own.

As mentioned previously, Iraq's WMD capabilities have been degraded but not eliminated. The reconstitution of key weapons programs may have begun, facilitated by the long absence of UN arms monitors. The 2+ year gap in the UN disarmament presence makes it difficult to verify the current status of biological, chemical and prohibited missile capabilities.

Meanwhile, Iran continues to place a high priority on developing WMD, specifically chemical weapons (CW), ballistic missiles and possibly biological agents. Tehran is aggressively pursuing nuclear technology and is progressing in its development of a large-scale, self-supporting CW infrastructure. Additionally, they have pursued the development of the Shahab-3 medium range ballistic missile (MRBM) to augment existing SCUD-B and SCUD-C systems. Two Shahab-3 flight tests were conducted in 2000 and, despite a failure on the last attempt, this system may now be available for use. Additional programs and capabilities can be expected in the future.

In South Asia, the missile and nuclear race between Pakistan and India continues. Both states are developing and testing a variety of technologies capable of delivering nuclear devices out to ever-greater ranges. Although the Central Asian states neither produce nor store WMD on their territories, given the geopolitical situation, WMD could transit their borders. DOD's WMD Customs and Law Enforcement programs support nonproliferation efforts in Central Asia.

Environmental Security (Water)

Water will dominate the environmental factors that pose the greatest threat to regional stability. The combination of water scarcity, water contamination, the lack of equitable water-sharing agreements, population growth, and exponentially increasing demand for water will exacerbate an already challenging and volatile situation in the Central Region. While environmental factors can easily trigger conflict, cooperation on these issues can promote regional stability and contribute to the on-

going process of conflict resolution. As such, environmental security remains an important element in shaping a future made complex by competition over natural resources. USCENTCOM-sponsored environmental conferences will continue to provide a valuable forum for the region to discuss environmental issues.

PROGRAM ASSESSMENT

Operational Activities

The focus of our day-to-day operations in the Gulf region remains Iraq. Iraq's long-term intransigence and non-compliance with UNSCRs has resulted in continued NFZ operations in both northern and southern Iraq, and our naval forces continue to conduct maritime intercept operations to limit Iraq's ability to smuggle oil outside the Oil-for-Food Program. Additionally, we maintain a rotational ground task force in Kuwait to assist with initial defense of Kuwaiti should Iraq attempt aggression.

USCENTCOM's Joint Task Force—Southwest Asia (JTF-SWA) conducts NFZ enforcement, along with our UK partners, in order to monitor Iraqi compliance with UNSCR 688 and deter enhancement of Iraq's military capabilities in violation of demarches and UNSCR 949. Despite the resumption of both international civilian flights to Iraq and intra-Iraq flights, JTF-SWA remains capable of effectively enforcing the southern NFZ.

One of the most visible examples of our commitment to the region is the presence of Naval Forces U.S. Central Command (NAVCENT) in Manama, Bahrain, the only component headquartered in our AOR. Operating with other coalition members, NAVCENT enforces UN sanctions against Iraq and protects our interests in the Gulf. Along with containing Iraq and ensuring freedom of navigation in shipping lanes critical to world commerce, NAVCENT operations serve as a constant reminder of U.S. commitment to stability in the Gulf region and Strait of Hormuz.

Since the beginning of Operation Desert Shield (August 1990), Maritime Intercept Operations (MIO) have resulted in the search of almost 13,000 ships bound for or departing from Iraq, with more than 760 diversions. Support for MIO has been significant with ships from Kuwait, Canada, the United Kingdom, Belgium, New Zealand, Italy, Australia, and the Netherlands, and boarding teams from Argentina and Poland having participated. Additionally, our naval units ensure freedom of navigation, execute maritime rescue missions, and conduct directed contingency operations.

USCENTCOM provides ground presence in Kuwait with Operation Desert Spring (ODS). This ongoing operation, under the command and control of Combined Joint Task Force (CJTF)-Kuwait, is built around a mechanized infantry or tank battalion task force, an Apache helicopter company, and a Multiple Rocket Launch System (MLRS) battery. The units which rotate on 120-day tours come from both the active and Reserve components with a deployed strength of just over 2,500 personnel. This force level has been present in Kuwait since October 1999.

These on-going operations promote stability in this volatile region, acting as a deterrent to potential crises. However, the destabilizing influence of Iraq, Iran and failed states such as Afghanistan and Somalia, require us also to maintain Operational Plans (OPLANs) and Contingency Plans (CONPLANs) to respond to a variety of crises when directed.

Maintaining our ability to meet the command and control requirements of our OPLANs and CONPLANs is an important mission. This requirement is particularly significant, as USCENTCOM is responsible for a major theater warfighting mission in an AOR 7,000 miles away. In view of this, we have initiated the development of a Deployable Command Post (CP) that can be introduced into any country in the AOR early and increase strategic flexibility to respond across the full spectrum of operations. This CP is being designed to be deployable by air (C-5/C-17) and modular. Depending on the situation, it can range in size from the CINC's aircraft with a small operational staff to a full up headquarters with all the critical command nodes available.

The USCENTCOM Theater Engagement Plan (TEP) provides direction and a common vision for our "shaping" of the security environment. Through theater engagement planning, we integrate the engagement activities of U.S. Central Command with those of other U.S. Government agencies, non-governmental and private volunteer organizations, and our friends and allies. The TEP draws resources from various agencies to include the Department of State, the Office of the Secretary of Defense, the Joint Staff, the Defense Security Cooperation Agency, and the military services. We are working closely with the Joint Staff to streamline funding processes and to develop a framework to better align resources with missions.

TEP engagement activities are divided into eight broad categories, including operations addressed above. Significant aspects of the remaining seven engagement categories are summarized below.

Exercises and Combined Training

The Joint and Combined Exercise Program is a key element of our current National Military Strategy, and is coordinated with other agencies' regional activities through the Theater Engagement Plan. The USCENCOM exercise plan includes 10 major exercises and 80 smaller exercises for fiscal year 2001. Our aim is to maximize the use of in-theater forces, increase multilateral exercise and simulation opportunities, gain the greatest possible training benefit for our forces, and combine exercises whenever practicable. The program remains a cornerstone of our mil-to-mil relationships and serves to guarantee access and enhance coalition capabilities.

In November of 2000, we executed Internal Look 01 (IL01), our premier battlestaff and coalition training exercise, by establishing a Contingency Forward Headquarters and simulating the execution of one of our principal plans. During the remainder of this year, we will execute several major sub-regional exercises. In May, Eagle Resolve, a senior-level symposium held in Bahrain, will be our principal mechanism for advancing the Cooperative Defense Initiative (CDI) among the GCC states. In early July, we will execute Regional Cooperation—formerly known as CENTRASBAT—a multinational peacekeeping command and staff exercise with various Central Asian, NATO and other Newly Independent States (NIS) at the Warrior Prep Center in Germany. In late July, we will execute the Golden Spear symposium in Kenya, bringing together the Ministers of Defense (MOD), Chiefs of Defense (CHOD) and Foreign Ministers of 10 East African nations to formulate regional strategies for humanitarian assistance and disaster relief. This fall, Bright Star will culminate our exercise program in Egypt when more than 35 participating or observing nations and approximately 65,000 personnel take part in a coalition field training exercise.

Combined Education and International Military Education and Training (IMET)

The Combined Education and IMET programs are pivotal to sustaining U.S.—host nation bilateral military relationships. These programs are relatively low cost, high value investments that support U.S. national interests and help shape the security environment for the future. The programs afford military members of regional states, many of whom are destined to become senior leaders in their respective countries, opportunities to attend courses in our military institutions such as Command and Staff Colleges and Senior Service Schools. Combined Education and IMET support congressionally-mandated democratization initiatives by exposing regional military officers to the concepts of military professionalism, respect for human rights, and civilian control. Some 540 students from our AOR will attend U.S. military courses, schools, colleges, and training this year.

Security Assistance

In coordination with our ambassadors and country teams, we manage security assistance programs to help the countries in the AOR improve their military capabilities and interoperability. Foreign Military Sales (FMS) in the Central Region have accounted for a significant portion of America's worldwide sales—38 percent from 1990 through 1999—while our Foreign Military Financing (FMF) programs have allowed us to assist AOR countries in meeting their legitimate self-defense needs and improving interoperability with U.S. forces.

In the aftermath of Operations Desert Shield/Desert Storm, a primary emphasis of countries in the region, particularly the countries of the Persian Gulf, was modernization of their armed forces through FMS and Direct Commercial Sales of U.S.-built equipment. Saudi Arabia is the largest FMS customer in the world, accounting for over \$83 billion in FMS thru fiscal year 2000. Combined with the other countries of the GCC, the total for this sub-region is over \$94 billion through fiscal year 2000.

Two significant security assistance highlights of this past year include:

- In March 2000, the United Arab Emirates (UAE) signed a \$6.4 billion commercial contract with Lockheed-Martin to purchase 80 F-16 Block 60 aircraft. Associated with this commercial sale is a projected \$1.6 billion in FMS. FMS cases will include program support, pilot and maintenance training, and F-16 munitions, which include AMRAAM, AIM-9, HARM, Maverick and Harpoon missiles. Though the F-16 purchase was a Direct Commercial Sale, U.S. Government and industry worked closely together to bring this to fruition. As a result, the sale is a step toward enhanced strategic partnership.

- Similarly, the sale of ATACMS missiles to the Government of Bahrain was finalized on 15 December 2000, as the Bahrain Defense Force (BDF) continues to place emphasis on equipping and training their land and air forces with U.S. resources and making them more capable contributors to Gulf collective security.

Humanitarian Assistance (HA)

HA programs provide basic economic and social benefits for the civilian populations of developing countries in the region. These activities, in concert with a variety of State Department programs, focus on developing indigenous disaster response capabilities. We expect in the coming year to complete projects that include rudimentary construction and water well drilling, disaster preparedness assessments, transportation of DOD excess non-lethal property, and various other medical, dental, and veterinary projects in seven countries.

Humanitarian Demining (HD)

USCENTCOM currently provides HD training to Yemen, Oman, Djibouti, and Jordan. The purpose of this program is to train host nation military and civilian personnel in demining operations, with the ultimate goal of establishing local, self-sustaining capabilities. U.S. led demining training efforts have helped several countries to develop significant capabilities. Jordan, for example, is developing a regional response team that will be able to assist other regional partners in their own demining efforts—an important step which enhances multi-lateral relationships.

KEY REQUIREMENTS

During my comments today, I will discuss the status of many programs. For fiscal year 2002, the President's budget includes funding to cover our most pressing priorities. I should note, however, that the programs I will discuss and the associated funding levels may change as a result of the Secretary's strategy review which will guide future decisions on military spending. The administration will determine final 2002 and outyear funding levels only when the review is complete. I ask that you consider my comments in that light.

USCENTCOM priority requirements are as follows:

Strategic Lift

With few permanently-stationed forces in the region, our vitally important power projection capability depends upon strategic lift and robust land and sea-based prepositioned assets. Our ability to deploy forces and equipment quickly remains the linchpin for conducting rapid response to contingencies in USCENTCOM's AOR. We must continue modernization and maintenance of our strategic deployment triad: airlift, sealift, and prepositioning.

The accelerated retirement of the C-141 fleet and the significant challenges of maintaining readiness levels of the C-5 fleet make continued production of the C-17, progress toward C-5 modernization, and support of the Civil Reserve Air Fleet program critical to meet major theater war deployment timelines. Our requirements for strategic airlift combined with intratheater airlift are addressed in Mobility Requirements Study 05, which we support.

The procurement of Large, Medium Speed Roll-on Roll-off (LMSR) ships is on track and will significantly enhance our lift capability. Under the current procurement plan, we will meet our force and sustainment deployment timelines with these LMSRs and Ready Reserve Fleet (RRF) assets by the end of fiscal year 2003.

Prepositioning in the region, the third leg of the strategic deployment triad, helps mitigate our time-distance dilemma, ensures access, demonstrates our commitment to the region, and facilitates sustainment of forces until the Sea Lines of Communication (SLOCs) are established. I will expand on this later.

Command, Control, Communications, Computers, and Intelligence (C⁴I)

USCENTCOM is responsible for executing a major theater war (MTW) plan without a headquarters located physically within the geographic AOR. As mentioned above, USCENTCOM requires a deployable command and control headquarters that provides the necessary flexibility to direct operations throughout the AOR during a crisis or armed conflict with assured 24-hour communications to the National Command Authorities (NCA), other Combatant Commands, the Services, USCENTCOM staff, our Component Commands, and deployed forces. We request the committee support our initiative to build this capability as provided for in our current funding plan.

Additionally, the strategic environment in our AOR mandates a capable and reliable C⁴I infrastructure. The C⁴I infrastructure in place today is a mix of legacy

equipment and modern components that have been assembled ad hoc as a contingency system. Intelligence, operations, and support systems increasingly rely on assured communications bandwidth. USCENTCOM must have a robust C⁴I infrastructure that supports these warfighting requirements. We will bring robust tactical communication systems into the AOR in wartime, but we need a joint theater C⁴I infrastructure to plug them into, one that takes advantage of fiberoptic cable and commercial satellite services that are now available in the Gulf states. Forces must maintain the ability to rapidly deploy to the theater, immediately access, and operate within our communications infrastructure and the global networks. Investing in our theater infrastructure will give us the tools we need to operate across the full spectrum.

Full Dimensional Protection

USCENTCOM focuses on full dimensional protection for forces and facilities around the clock. Protection begins with timely, high confidence early warning of terrorist planning and targeting. Recent intelligence community efforts to improve performance in this area through improved analysis and information sharing are steps in the right direction, but more needs to be done. We need a dedicated, long-term effort with access to all terrorist-related information, both intelligence and law enforcement, leveraged by state-of-the-art information technology tools, to get in front of the next attack. Timely warning will generate defensive and offensive options that we do not currently have. I view this as our most important initiative to protect forces and facilities. We must concurrently ensure that we are effectively postured in the event timely warning does not come. Improvements are needed in our ability to identify friend or foe (IFF), create standoff, and counter the delivery of explosives (direct or indirect) used against component forces and facilities. Approximately 81 percent of USCENTCOM's funding for military construction projects is directed toward force protection requirements. I expect our funding requirements to increase in the near future as we finalize ongoing vulnerability assessments and increase our emphasis on elimination of force protection construction waivers.

Successful execution of USCENTCOM OPLANs/CONPLANs also requires the capability to detect and characterize chemical, biological, radiological or potentially hazardous elements, as well as the ability to decontaminate fixed sites and provide collective protective measures in order to build and sustain forces within the AOR. We intend to retrofit existing structures and incorporate chemical/biological hardening into all new construction.

Finally, integrated theater air and missile defense will remain a priority to provide robust and responsive defense of theater forces and critical assets against the full range of enemy Theater Ballistic Missiles (TBMs) and cruise missiles.

Intelligence, Surveillance, and Reconnaissance (ISR)

We have made progress in bringing shared situational awareness to our components and regional partners, but still have more work to do. USCENTCOM has teamed with national intelligence agencies, other Combatant Commands and components to devise a DOD-wide interoperability strategy employing a common set of analytical tools and security safeguards that will allow us to rapidly share information at multiple security levels and across echelons. USCENTCOM currently serves as the "warfighter proving ground" for several interoperability evaluations, having invested some \$3 million in this effort in concert with the Defense Intelligence Agency (DIA), the Joint Battle Center, the Assistant Secretary of Defense (ASD) for C³I, and others.

Synchronizing U.S. and coalition operations via a secure shared network is an essential USCENTCOM interoperability initiative. Our concept begins with hardware/software installations for the six GCC states plus Egypt and Jordan, to provide our partners with near-real time threat data and releasable operational information to support our contingency plans. While intelligence community and Commander in Chief (CINC) Initiative Funds have enabled us to make some initial progress, we will need congressional support to operationalize this capability as provided for in our current funding plan.

Theater airborne ISR remains a critical enabler for effective regional indications and warning. Shortfalls in our current capabilities jeopardize our ability to obtain the warning necessary to execute our OPLANs. Solutions lie in fielding additional modernized airborne reconnaissance systems and next-generation long-dwell unmanned aerial vehicle (UAV) platforms. Such assets are necessary to fill early warning and mobile target collection gaps and provide a surge capability in the event of crisis.

The health and status of national systems is also of concern to USCENTCOM. A robust national imagery intelligence (IMINT), measurement and signature intel-

ligence (MASINT), and signals intelligence (SIGINT) systems architecture is essential to providing indications and warning and situational awareness to all echelons of command. We will continue to rely on these systems in tandem with the direct threat warning provided by our theater ISR assets. The current mix of platforms and sensors does not provide the full range of collection required for comprehensive threat warning and support to fast-paced combat operations. Continued congressional support for existing and planned national sensor platforms and upgrades, as provided for in our current out-year funding plan, is essential.

MASINT provides key indications and warning, theater ballistic missile warning and battle damage assessment. However, the current lack of operational sensors and a formal architecture significantly reduces MASINT's ability to support military operations. MASINT has great potential and can provide tremendous support to the warfighter. Your continued support is needed for existing and planned operational sensors and associated architectures to make the system more capable.

It is also essential that we maintain a robust tasking, processing, exploitation, and dissemination (TPED) architecture. This remains a daunting challenge, as current limitations impede our ability to process, exploit and disseminate large imagery files and move this critical data through the "last tactical mile" to our components and their supporting units.

Active duty intelligence personnel manning and systems support also remain challenges at USCENTCOM, given our high operating tempo. That said, our Reserve program is thriving. Reserve personnel have been integrated across all functional lines including systems, counterterrorism, analysis, imagery, targeting, and battle damage assessment. We would be unable to accomplish our missions and meet emerging requirements without this Reserve component contribution.

Working with Regional Forces

As I discussed earlier, key elements of our current national strategy include ensuring continued access for U.S. forces and enhancing the ability of regional states to provide for their own security in concert with us and with each other. To meet these objectives, USCENTCOM has developed a program that includes operations, exercises, security assistance, education, humanitarian demining, and military-to-military contacts.

With few permanently-stationed forces in the AOR, a strong mil-to-mil program provides access to our friends and allies. Our engagement program provides not only training to our forces and those of our partners, it also provides an outstanding example of a successful, professional, and apolitical military to nations striving to build their own military traditions. Military-to-military interaction engenders trust and confidence and ultimately translates to greater security for our people. Our combined commitment to aligning resources with these programs will ensure success in achieving our national objectives.

Prepositioning and Forward Presence

Prepositioning in our AOR is the third leg of our strategic deployment triad. The Navy and Marine Corps Maritime Prepositioning Force (MPF) program, comprised of Maritime Prepositioned Ship Squadrons (MPSRONS) 1, 2, and 3, maintains a high materiel readiness rate. It will become more robust when the MPF Enhancement (MPF(E)) Program, scheduled for completion in March 2002, is fully fielded. Each MPSRON will gain a fleet hospital, a Navy mobile construction battalion, an expeditionary airfield, and additional warfighting equipment. The MPSRON-1 Enhancement ship is already on station.

The Army's prepositioning program, with a goal of placing a heavy division of equipment in the region, is advancing on schedule. The brigade set in Kuwait maintains high operational readiness and is exercised regularly. The prepositioned site in Qatar (Camp As Saliyah) houses the second brigade set and a division base set estimated to be completed before the end of fiscal year 2003. The afloat combat brigade, APS-3, is complete, and combat ready, and a second afloat brigade is planned to augment APS-3 with an equipment fill of 83 percent of requirement in the near term. The Army is evaluating other actions which could lead to a fill of 92 percent of requirement.

The Air Force Harvest Falcon bare-based materiel program is also a vital asset to meet our requirements, as these assets support the generation of Air Force combat sorties in the early stages of contingencies. Having these sets positioned in the AOR lets us avoid diverting critical strategic lift assets at the start of a conflict to the movement of bare-base materials, thereby delaying the arrival of warfighting elements. Currently, our on hand Harvest Falcon assets are 45 percent mission capable.

Transformation

Our ability to shape the environment and influence the battlespace is linked to transformation efforts by the Services and members of the joint team. In particular, USCENTCOM supports the development of the doctrine, organization, and training that will enable joint, combined operations in the multinational setting. We support further development of a process for integrating coalition members into our transformation efforts.

Across the board, USCENTCOM endorses Service efforts aimed at transformation of existing force structures to modernized, versatile, full spectrum forces. Of special importance to USCENTCOM is Army transformation, which will provide required adaptive, lethal, and survivable forces responsive to the diverse operating continuum in our AOR.

Quality of Life

Finally, the requirements identified above mean little without our most important resource, people. An essential component of force readiness is continued emphasis on improving the quality of life for service members and their families. I applaud the leadership shown by Congress with passage of the "TRICARE For Life" program for retirees and family members. I ask for your continued support to the Defense Health Program as we fully realize the "TRICARE promise" for our personnel and families stationed overseas and in remote locations. "Taking care of our own" through medical, pay, and other entitlement programs provides the Services a set of powerful recruitment and retention tools.

CONCLUSION

In the near-term, Saddam Hussein will continue to challenge our resolve as we rebuild and strengthen the Gulf coalition. In the long-term, Iran's moves toward regional hegemony could be of greater concern. The Central Region is as dynamic as it is volatile. Weapons of mass destruction, state-to-state conflict, terrorism, and general instability will continue to place special demands on our people and on our ingenuity.

Interaction and cooperation with regional militaries will remain a vital ingredient in enhancing stability and security in this AOR. This interaction equals access and goes a long way toward building trust and confidence with our friends and allies. Our presence strengthens relations with our hosts and improves our ability to protect ourselves by eliminating suspicion, demystifying intent, opening the door to communication, and denying the closed environment in which terrorists thrive.

The volatility of our region requires that USCENTCOM remain adaptable and agile. Without a large footprint in the region, we must be truly "deployable." Responsive command, control, and communications during peace, crisis, and conflict will remain key to our ability to accomplish the mission. We have the finest soldiers, sailors, airmen, coast guardsmen, and marines in the world. Your steadfast, superb and visible support has made it so and you can count on them to do all we ask of them—and more.

Chairman WARNER. Thank you very much.

General Ralston, I am going to pick up on your last presentation about the need for the military construction in your area. I think that is a very important issue. It does not have the drama of conflict and all of the other things that come to the attention of people through media and otherwise, but it is just as important to give your troops the basic requirements of a quality of life which they deserve, commensurate with the onerous burdens of picking up here in the United States, moving overseas and adapting to the local economy. Often it is difficult for the wife to engage in other activities and care for the family if the income level of the family requires her to work.

You and I understand those things through long years, and I am going to very much participate in trying to give you this support, but I have to tell you that that is but one part of the overall concern here in Congress of the United States, and certainly with this Senator on this committee. Another area of concern is a drifting at-

titude that I see with respect to NATO, brought along by this European Security and Defense Policy (ESDP).

Yesterday, our committee had the pleasure of receiving the British Secretary of State for Defence, and we had a long discussion with him on that subject. I will speak for myself for the moment—there is a concern about further augmentation of U.S. spending and so forth with regard to NATO.

Now, it may well be that we will have to do this by necessity, because the evolution of this new concept in NATO is going to take a long time. This is an emergency situation that has to be addressed, but I would be less than candid if I did not point out my concern, and I think of others, about this situation.

I remember when I first came to the Senate some 23 years ago, the then-Majority Leader of the Senate, or he had just stepped down, he had an amendment, the Mansfield amendment, to bring our troops out of NATO. In the early years in my Senate career, time and time again we had to go to the floor of the Senate to gain the support of the whole Senate to do an orderly withdrawal of our forces, and not a precipitous one.

I am not suggesting that that is going to happen here tomorrow, but nevertheless, that is a part of Senate history, and it could be brought up in an orderly way. Yesterday with the visit of our British colleague, one of our colleagues brought up the question of whether or not U.S. force levels in Europe need to be kept at the 100,000 figure that you mentioned, in view of the desire for this initiative within NATO. I think it is important to get this into the record every time we have the opportunity, through your appearance and others.

General RALSTON. Thank you, Mr. Chairman. Let me give a little bit of background on the European Security and Defense Identity (ESDI) and ESDP that we talk about. For years, we as Americans have asked the Europeans to do more to carry their own security, so I would like to be supportive of anything that improves the security posture of our European nations, and so therefore I want to be supportive of ESDI with the caveat that it should be done in a way that does not detract from the NATO alliance.

Now, I think there is a way to do this. Let me give you what I think is the right way ahead, and then I will come back and talk about some of the downsides if we do not do that.

There are four nations, Mr. Chairman, that are in the European Union that are not in NATO: Finland, Sweden, Austria, and Ireland. I think the proper way to do this is to bring those four nations' military planners to Supreme Headquarters Allied Powers Europe (SHAPE) headquarters, where we have the 19 NATO nations there, and in terms of operational planning, military planners will do what military planners always do. They will come up with military options. We will have option A, and option A will have a certain set of forces, and a certain risk factor, and a certain chance of success, and option B will have a different set of forces, and a different risk, and different chances of success, and option C, and once those options are designed, then they can be provided simultaneously to the European Union and to the North Atlantic Council.

Now, the two political bodies will have the same set of plans, the same set of facts, and the two political bodies can then deliberate

as to who should do this operation, should this be a NATO operation, or should it be a European Union operation, and the United States will be well-represented in that debate as it sits around the table in Brussels.

Now, my concern is if we do not do it the way I have outlined, and instead the European Union sets up their own planning mechanism over here, that has three major downsides. First, it is wasteful of resources. The last thing that the European nations need to be doing is spending money on more jobs for generals in headquarters in Paris. That is money that needs to be going into the battalions and the squadrons and the ships, not in more headquarters.

Second, if we do not do the planning the way I said, then the European Union will come up with options 1, 2, and 3, NATO will have A, B, and C, and when it gets to the two political bodies, there will be more confusion than normal in times of crisis. We do not need that.

Third, the European Union, if they pick battalion X that they want on their operation, how do they know that battalion X is not assigned to a NATO plan, and a NATO operation?

So if we do it the way that I said, where we bring the European Union planners that are not already part of NATO, those four nations to SHAPE, I think this can be well-managed, and I think it can, in fact, be an improvement, but we do not have those details ironed out yet, and that is something I am very concerned about. It is something that we need to keep pushing on, and I think we need to do it in the next few months to get that tied down the way that it should be.

Chairman WARNER. I thank you. So it is in the next few months that we will get some clarity to this situation.

General RALSTON. That is certainly my hope.

Chairman WARNER. I want to address an article which appeared on March 21 in the *London Daily Telegraph*, and I will give you a copy of it. Would you quickly pick up on the point they are trying to raise here. I think this record today should incorporate your testimony to strongly refute the principle they are trying to advocate.

"NATO's attempt to quell the growing conflict in the Balkans is being hampered by Americans' reluctance to risk casualties, alliance officials said yesterday." Now, that is attributing it to alliance officials, who I presume would be persons who work in the same command structure that you are working in, if there is credibility to this.

The problem is not discussed openly, but British officers speak of "body bag syndrome," as the major brake on NATO operations to stop infiltrations of Albanian extremists from Kosovo into Serbia and Macedonia.

The U.S. forces may be highly motivated by fighters and superbly equipped, but there is frustration with the perception that American commanders are under the intense political pressure not to shed soldiers' blood. "The body bag syndrome is a real problem now, said a senior European officer. It is not that the American soldier doesn't want to fight. The politicians won't let him."

The issue has become urgent, since ethnic Albanian rebels began to infiltrate both Yugoslavia and Macedonia late last year, using the American sector of Kosovo as a base of operations.

Now, certainly, whether we are military field commanders like yourself, or those of us here at home in Congress, we have foremost in our mind the safety of our military in the forefronts of the world, and the same may be said of this article about your AOR, General Franks, but the Kosovo war was fought in a unique way, unprecedented with almost total dependence on air, as opposed to any ground elements. The planners devised that and essentially brought about the cessation of hostilities in that region, and I think it was a successful operation. That is my personal opinion.

We were very proud of the fact that the performance of our military, under the command of the leadership of their senior officers, performed this mission with a minimum of casualties.

Clearly it is my perception that our military is willing to accept the risks for which they chose this profession, and that they will follow the orders of the Commander in Chief, our President. Congress does not issue any orders, but we are very vocal, and a very important co-equal partner of the infrastructure supporting our troops, but I do not know that anything has emanated from Congress that would give rise to the accusation in this article.

I know of no commands or orders given by the senior military commanders that give rise to it. To the contrary, I feel that our forward-deployed troops will accept those risks professionally associated with their mission, and if it results in casualties, it is highly regrettable, but that from time immemorial has been the role of those in uniform.

Now, I would like to have your comment. I presume your views coincide with mine, but this is a fairly serious indictment that was raised in the British press, particularly at a time when we see requests coming in for additional troops. I think it is important that you speak out with clarity on this article, because while you may not be familiar with this article, you have heard this accusation before.

General RALSTON. Thank you, Mr. Chairman. I did read the article, and I will tell you that I take strong exception to the sentiments expressed in that article. Soldiers that are in Kosovo today that are on the border are doing, in my judgment, a magnificent job.

Chairman WARNER. Incidentally, Senator Stevens and I and others were there just 3 weeks ago. We were on that very border where the fighting is taking place in the valley with you and our troops.

General RALSTON. Yes, sir, and Mr. Chairman, I very much appreciate the fact that so many members of the Senate took the time to go and look at that, and you saw those magnificent young soldiers up there. They were not afraid of anything, they were there to do their job.

Just a couple of weeks ago, on the Macedonian border, we had a case where an American patrol was there. They were threatened by armed extremists, and they shot two of them. They followed the rules of engagement exactly as they should have, and they did that, but that is a risk that they take every night and every day. It could

have been that the Albanian extremist fired the first shot, and shot our people. As it was, they protected themselves. They did the right thing.

So I would take strong exception to the sentiments expressed in that article. Our people are there. We do not expect them to go do things that are irresponsible. There were some minefields on that border. When you are operating in minefields, you have to do that very carefully, and so we are going to make sure that our people are protected to the best extent that they can be, but they will willingly accept that risk, we will accept that risk, in order to carry out the mission.

Chairman WARNER. As commander, you are not asking of other military units to take any greater degree of risks than being assumed by our own troops.

General RALSTON. That is exactly right.

Chairman WARNER. Thank you.

General FRANKS. Mr. Chairman.

Chairman WARNER. Yes, General Franks.

General FRANKS. If I might add to the same point, I also read the article, and I also take exception to it. It brings to my mind several things, not the least of which is a letter which I received from an Australian officer after last week's training accident in Kuwait.

I published it on our web site for everyone to see, wherein the Australian officer talked about the sense of pride that he had had when he had been a member of that coalition force standing in Kuwait, had had the opportunity to work with coalition people, U.K., his own, New Zealand, Kuwaitis, a variety of other Gulf States, as in fact they had gone about their business, whether it be training, or whether it would be maritime intercept operations, or whether, in fact, it be Operation Southern Watch, where these young people fly in harm's way every day.

I have not, sir, and I do not expect to see any reluctance whatsoever in the will of these young people from across the coalition wherein all of us serve to do what they are asked to do.

Thank you, Mr. Chairman.

Chairman WARNER. Senator Levin.

Senator LEVIN. Thank you, Mr. Chairman. Let me add my welcome. I am sorry I was late. I was on the Senate floor. I have had a chance to chat frequently with both our witnesses and congratulate them on the terrific job that they and the forces under their command are doing.

First, I want to talk to each of you about the no-fly zones. Each of you have a no-fly zone under your command, I believe. It is a very frustrating engagement, I think. So the question is whether or not flyers are at risk. From time to time when threatened they act to remove the threat, as they should. We are spending a tremendous amount of effort and money to maintain these no-fly zones.

At the same time, we are told that the sanctioned regime is gradually becoming weaker. I guess my question for each of you—because one of you has the northern no-fly zone and one of you has the southern—is whether or not you see any daylight in terms of accomplishing a mission of removal, either through those no-fly

zones, which obviously you have a different mission, or through some other means, removing the regime. If not, whether or not you believe that the maintenance of those no-fly zones is really accomplishing a useful purpose.

Are we satisfied that, for instance, Saddam is not building up his forces on the ground in those no-fly zones? Do you feel that they are accomplishing their limited mission? Is it worth the risk, in your judgment, to our flyers to maintain those no-fly zones? Is it also worth the cost?

Now, I know there are a lot of policy questions wrapped up into that, but I would like to get your judgment on this as professionals.

General RALSTON. OK, let me go first.

You are right, Senator Levin, there are a lot of policy issues there, and what I try to do is to make sure that I can articulate as best I can to the Joint Staff, to the Secretary of Defense, and to the administration, not whether we should or should not be doing this, but what the military consequences are of doing it.

Once again, as I said at the beginning, there is a risk that every time our pilots enter Iraq to enforce that no-fly zone, they willingly accept. We are, in fact, doing I think a very credible job of enforcing the no-fly zone, and do believe that it has a deterrent effect in terms of what the Iraqi military does, either to move in the north against the Kurdish citizens that are there, and I will let General Franks talk about the southern part.

As the administration reviews their policy, only the President can ultimately make the decision as to whether the risk and whether the cost in terms of resources is worth what comes out on the positive side, and so I am not going to try to make a judgment here today. The administration is reviewing that, and what we are doing on the military side is carrying out whatever that policy happens to be.

I do believe we have a responsibility to tell them, as I have told you this morning, what those risks are in terms of the chances of an American airman being downed over Iraq, but ultimately that has to be a policy decision.

Senator LEVIN. General Franks.

General FRANKS. Mr. Chairman, I would add to the comments of General Ralston by saying, my direct experience with the southern no-fly zone goes back about 4 years in the immediate past, 8 or 9 months in Central Command, and several years as the Army component commander before that, having supported Operation Southern Watch, and having observed the maritime interception operations.

I agree with the observations that General Ralston made. That said, this is not a without-cost enterprise—both monetarily and in terms of the way we put our people at risk as we enforce this no-fly zone.

As this committee knows, some 153,000 times our pilots have been in the southern no-fly zone, 153,000 times since 1992. If you go back just the past 12 months, we have put our young pilots and support crews in the southern no-fly zone 10,000 times. We have had more than 500 occasions where our people have either been illuminated by radars, or engaged by surface-to-air missiles, or engaged by antiaircraft artillery fire.

Senator LEVIN. Over what period of time was that?

General FRANKS. Over the past year, sir.

As I look at what has been accomplished, I look at the reason we engaged in these no-fly zone enforcement processes in the first place, and I am reminded of the Security Council resolutions which came about at the end of the Gulf War, provisions of which the Iraqi regime has not yet complied with.

I look at occasions where the regime has threatened the Kurds in the north, Saddam's own people, the Shia in the south, his own people, and as recently as 7 years ago, massed large Republican Guard formations down in the vicinity of Kuwait again, in violation of the resolutions that came about at the end of the Gulf War.

So, sir, as I look at what we have done, placing our troops in harm's way, I have to believe that the containment of the regime has had some positive effect.

I will defer to the policy team, the State Department, Secretary Rumsfeld, Dr. Rice, the President, the Vice President, to review the risk-gain analysis with respect to our current policy. I believe, as General Ralston said, that process is ongoing. I have high confidence in that process, and I have had the opportunity to inform that process. I believe that a quality policy will emerge from it, and I believe that that policy will address the pillars upon which we should stand as we look back at the reasons why we are involved in this key region of the world.

Senator LEVIN. Just one followup question, and then I will be done on this particular subject. This is on a very directly-related matter. Secretary Powell stated that the rules had been changed to enable a more effective response to Iraqi activities to develop weapons of mass destruction and the means to deliver them.

Can either of you shed some light on the comment of Secretary Powell about rules being changed so we can more effectively respond to the efforts of Saddam to develop those weapons?

General FRANKS. Senator Levin, I cannot talk directly to Secretary Powell's comment. I can tell you that the policy review that is ongoing is, in fact, reviewing what we have heretofore called the red line associated with weapons of mass destruction, and the means to deliver them along with the other issues that we have included in the policy in the past, and beyond that I am not sure how to comment.

Senator LEVIN. You do not know about a change of rules yet?

General FRANKS. No, Senator.

Senator LEVIN. General Ralston?

General RALSTON. No, sir.

Senator LEVIN. Thank you. Thank you, Mr. Chairman.

Chairman WARNER. Thank you, Senator Levin.

Senator Smith.

Senator SMITH. Thank you very much, Mr. Chairman.

Good morning, General Franks, General Ralston.

I want to mention three areas that to some extent overlap both of your commands that are very troubling to me, and I think to the region, if you could just comment briefly on them.

First, there are reports that Russia has agreed to supply some \$7 billion worth of weapons to Iran over the next few years, specifically three kilo-class submarines that, to my knowledge, are the

only submarines owned by a Gulf country. We also know that Iran is now interested in the SU-25 fighter aircraft, which, of course, would close the air power gap between Iran and its Gulf neighbors.

Second, there are reports that the Chinese helped to upgrade the Iraqi air defense systems, and General Franks, you just talked quite at length in response to Senator Levin's question about our pilots in harm's way, so if you would comment on that point. Third, we received in Congress the recent report for the first half of 2000 that notes that China continues to send "substantial assistance to Pakistan's missile defense program," not only Pakistan, but also Iran and Libya.

There are some reports saying this proliferation is continuing despite the previous administration's lifting of U.S. sanctions against China based on a promise that Beijing would stop the sales.

So in summary, we are seeing both Russia and China making decisions that severely impact, I think, not only the volatility of the region, but the safety of our forces in those regions.

Let me just go back to each point, and if you would prefer to take the one in your area, that is fine. Let me go specifically now to the Chinese helping to upgrade the Iraqi systems. First of all, is that true?

General FRANKS. Senator, it is true.

Senator SMITH. Second, can you characterize the increase of that effectiveness and how this might impact our forces as they go up in the no-fly zone?

General FRANKS. Senator, I propose in closed session to give you some greater details, but for the purpose of open session, I would say that as we consider the threat our pilots face in the southern no-fly zone, the thing that gives us the biggest problem is the integrated air defense capability of the regime.

That integrated air defense capability involves several factors. One is the command and control ability, that being the bunkers, the communications and so forth, where the leaders command and control the air defense operations. Another is the communications capability, and in this case that involves some fiber optic cable link, which is the point of your question.

Senator SMITH. A Chinese company.

General FRANKS. Affirmative. Also involved are the weapons platforms themselves that are involved in the integrated air defense, and as we look at the threat it is always in our best interest to assure that it is not possible for the Iraqis to have early warning, and to have competent target-tracking radar, and to be able to move signals around southern Iraq which will cause their weapons platforms to effectively engage our air frames.

That was the case, and so the part of this that relates directly to your question about the Chinese is this business of the communications architecture that supports this integrated air defense capability, specifically this business of fiber optics, and it was in that context that I answered your question. Yes, the Chinese were involved.

Senator SMITH. There have been press reports—and if you choose to go into this in closed session, that is OK—that the taking out of the Iraqi sites was based on the fact that we might injure Chinese technicians. Is there any truth to that?

General FRANKS. Senator, what I will tell you is that that would never be a reason that would cause us to place our people in harm's way. I will give you the specifics in closed session, if I may, but I will tell you that at no time were our airmen subjected to increased risk as a result of these capabilities while we did not strike them.

Senator SMITH. To the best of your knowledge, was there any information about what the Chinese were doing in Iraq with their defenses during the Permanent Normal Trade Relations (PNTR) debate?

General FRANKS. Sir, I cannot answer that question. I do not know.

Senator SMITH. Just let me know when my time has expired, Mr. Chairman.

We move over to your area, General Ralston, on the arms proliferation, in terms of assistance to Pakistan, and how that might impact the relationship between India and Pakistan: What is your assessment of how that impacts volatility of the region?

General RALSTON. Senator Smith, let me make a comment and then defer to General Franks. Neither India or Pakistan are in my AOR—

Senator SMITH. I apologize.

General RALSTON.—so I am not the expert on that, but from my previous job as Vice Chairman—

Senator SMITH. Libya.

General RALSTON. Obviously, Libya is one that I do worry about. Yes, arms proliferation, weapons of mass destruction is certainly a topic that is of concern to me in EUCOM, and it is of concern to NATO. This is one of the issues that we have been pushing hard in NATO, that the European nations have to acknowledge the fact that there is a weapons of mass destruction threat, and that we need to be prepared to counter that.

Senator SMITH. General Franks, if you would just briefly comment on the India-Pakistan portion.

General FRANKS. Sir, the comment that I would make would be that weapons of mass destruction, as General Ralston said, are obviously of great concern to us, and the proliferation of technologies associated with that, to include missile technologies, is a problem for us.

We can talk about the specifics of weapons types and so forth, if we could, again sir, in closed session, but I will tell you that proliferation associated with the parties that you mentioned is, along with other parties, a continuing concern for us in the Central Region.

Senator SMITH. Last point, the Russians and the Chinese obviously in seemingly isolated ways are impacting both of these regions, the European Command and Central Command. Do we have any evidence of coordination of those efforts between the two countries?

General FRANKS. Sir, I have no evidence of it.

Senator SMITH. General.

General RALSTON. Neither do I, Senator.

Senator SMITH. Thank you.

Chairman WARNER. Thank you very much, Senator.

Senator Carnahan.

Senator CARNAHAN. Thank you, Mr. Chairman.

General Franks, I have been struck by the breadth of our continuing operation to contain Saddam Hussein. The average American would probably be surprised to learn that coalition forces flew 20,000 sorties in the past year to control the no-fly zone in southern Iraq, and that our forces have been fired on 500 times with surface-to-air missiles and anti-aircraft fire. We should be quite proud of our dedicated forces participating in these potentially dangerous missions, stationed for long periods of time far away from home.

You have stated that enforcement of the no-fly zone is necessary business to assure that Iraq does not threaten its neighbors and its own people. Since Saddam Hussein appears to have strengthened his grip on power, the United States and its coalition partners have no choice but to remain vigilant and maintain a strong presence in the region.

Would you agree that more needs to be done to keep the American people informed of the threats posed by Saddam Hussein, and the importance of maintaining our military presence in the region?

General FRANKS. Senator, that is my view, yes.

Senator CARNAHAN. Thank you. One other question. I share your concern that the ongoing Israeli-Palestinian violence could lead moderate Arab governments to distance themselves from the United States, but as you point out, these states rely on the U.S. presence in the region to deter intimidation by Iran and Iraq.

Clearly, the self-interest of these moderate Arab states is essential in relieving the current tensions, and I believe they have an important role to play in urging a stop to the current violence, and a resumption of negotiations between Israel and the Palestinians. What communications have you had with the leaders of these countries to urge them to play a constructive role in ending the violence?

General FRANKS. Senator, with respect to precisely that point, my interaction with the leaders in our region has not talked to, has not made suggestion as to what they could do in order to ease the Palestinian-Israeli problem. What we in Central Command do is, by way of constant visit and constant interaction, provide the opportunity for them to inform us of what they believe the issues to be, which we then work very closely with not only defense but also—

Senator CARNAHAN. You are not being proactive in this respect?

General FRANKS. In terms of the military side of our organization, no, ma'am. What we are doing is informing them of our own policy, assisting with consultations, providing advice within our own governmental construct, the new policy team, and taking the results of their ongoing consultations with each of the leaders out in this region.

Senator CARNAHAN. General Ralston, I certainly applaud you for your focus on readiness in the European Command's forces, and you have stated it is one of your top priorities. Your testimony, however, includes many examples of cuts in training exercises throughout the theater.

This brings me to a much broader subject. We are currently considering a budget that would significantly reduce revenues to the Government over the next decade, yet we are being asked to commit to this budget before the Department's review is completed, and before we have a firm idea of what our military needs are going to be.

If the anticipated surpluses are not as large as we expect them to be, there will be calls for restraint in domestic spending, including defense spending. Do you have any concerns that, like in the past, the overall budget outlay could adversely impact our ability to fund important military needs?

General RALSTON. Yes, ma'am. First of all, I am not privy to the budget that will be coming over, so I cannot talk in detail to what that is. I do not know what is going to be in there.

What I tried to point out in my statement is a statement of fact, what has happened in the past. All I can do is outline for the administration and for Congress what steps we would have to take in terms of cutting back on exercises, cutting back on deployments, and cutting back on training if our operation and maintenance budget is not funded at the proper level.

Senator CARNAHAN. Thank you, Mr. Chairman.

Chairman WARNER. Thank you very much, Senator.

Senator Inhofe.

Senator INHOFE. Thank you, Mr. Chairman. I am sorry I have been in and out. We have two committee meetings at the same time.

General Ralston, I do appreciate the fact that you did single out readiness. It is a crisis, not just in your area but all over. I chair the Readiness and Management Support Subcommittee. We had two hearings, one yesterday and one the day before. The one yesterday was on facilities, Mr. Chairman, and we had 14 witnesses from all ranks, and some Reserve and Guard components, most of them regular services. It is a crisis throughout here, in the United States, and I heard you mention, and I am very sensitive to the conditions that you showed us on your chart in your theater, but also the same thing is happening here. In fact, 67 percent of our facilities were rated C-3 or below, and that is all here in the United States. I applaud you for being concerned with doing something about that over there. We also must concentrate on doing it over here at the same time.

You think about the retention problems that we are having and I do not think there is anything that contributes to that more than these kinds of deplorable conditions and quality of life, and so this is a problem.

Now, second, I want to say, I really do appreciate the fact that you have come out and talked about Africa. During the whole situation in Kosovo, I was trying to get the point across that if you would take the countries of Burkina Faso, Sierra Leone, Cote D'Ivoire, Benin, Togo, Gabon, Rwanda, Burundi, Kinshasha, Congo-Brazzaville, in just those countries, for every one person who is ethnically cleansed in Kosovo, there are 100 persons ethnically cleansed in those West African and Central African countries.

I applaud you for your interest and for bringing it out, and letting America know that there is a serious problem there, and that we are doing what we can to prevent such atrocities.

General FRANKS, I was down in the Sinai, in that area down there. Quite often we talk about what is happening to our readiness as a result of deployment to places like Kosovo and Bosnia, and I am concerned about that, because from a ground logistics standpoint, if something should happen in the Persian Gulf, we would not be able to handle those without, I think, being totally dependent on Guard and Reserve. I was told that by the senior officer down there.

But in areas like the Sinai, where we have troops, do you see any areas where you think that we might be able to reduce the number of troops for the benefit of an increased readiness?

General FRANKS. Senator, as you know, and certainly as the committee knows, Central Command is a bit of an unusual command in that we really do not have assigned forces, and so the answer to your question honestly is, yes, sir, weekly and daily.

We will change our force levels, and they will range generally between, as I mentioned, 18,500 up to perhaps 25-26,000, dependent on what particular contingency operation we may be running at a given point in time, or depending on whether we have a Marine Expeditionary Unit in our AOR at a point in time, and so, sir, what we do, literally, is we move up and down the force levels, depending on what the needs are in the AOR on a given day.

Senator INHOFE. In the case of the U.S. troops, did they go through the Vieques training?

General FRANKS. Vieques, yes, sir, they did.

Senator INHOFE. But was it inert?

General FRANKS. With inert, yes, sir.

Senator INHOFE. With inert. What is your feeling about inert versus live ordnance?

General FRANKS. Senator, as a matter of fact we also, in all of our training areas we will use sometimes inert only, and sometimes a combination of live, in this case Mark-82 bombs, or inert bombs, and so the preference is to use the live munitions when we can, and I think that is responsive to your question. But my experience has been that the other munitions also provide great training value.

Senator INHOFE. Well, we had a hearing before my subcommittee 2 days ago on encroachment, and of course Vieques is the poster child for that kind of a problem.

General FRANKS. Right.

Senator INHOFE. All of them came forward and said that in the cases of the Marines, the Expeditionary Units, as well as the live Navy support fire, and the ability to use our pilots was absolutely necessary, and it did affect the quality of it. I want to get your perspective.

General FRANKS. I agree with that. I think there is a place for both inert and live. Obviously, the most realistic training we get is with live munitions.

Senator INHOFE. Yes. Now, lastly, right after the U.S.S. *Cole* attack occurred, I went over there and tried to determine what I could from my perspective to determine what happened there.

Every naval officer I talked to said that if they had had the option of refueling at sea, they would have done it, and this was without exception.

You cannot say for sure whether it would not have happened, but it certainly would not have happened in Yemen, and Yemen was a terrorist code red at that time, and yet there were no choices.

As you go along from the Mediterranean down through the Suez and the Red Sea and turn left and go up toward the Persian Gulf, everything has to refuel someplace. I came back with the opinion, and it was fortified by every Navy officer that I saw, that we should have that capacity out there somewhere, when you turn that corner up to the Arabian Sea.

After that, we went back to a couple of the boneyards and we found two excellent oilers that could be deployed in a very short period of time. I am trying to get this done. What would be your feeling about trying to get some oiler capacity, refueling at sea capacity in that area?

General FRANKS. Senator, I will give you a two-part answer. First off, I would always defer to the CNO, Adm. Vern Clark, and his determination within a given resource level of what he thinks is the appropriate mix.

Now, having said that, from an operational perspective, increased operational flexibility is always good for a geographical commander, and I would say to you, we keep right now two U.S. and one U.K. oilers in the region, and we are able to use those by some repositioning in order to not put our people in harm's way unnecessarily, as you are aware, Senator, and also by paying very close attention to march rates against the global naval force presence policy. Which is to say, if you provide an extra day here and an extra day there in transit, then the speeds of transit are reduced and much less fuel is burned, and so, sir, I would end by saying that a combination of operational flexibility, and some flexibility in global naval forces presence, provides to us what we need to have in the CENTCOM AOR.

Senator INHOFE. Well, yes, and my time has expired, but I do want to say that I have talked to Admiral Clark about it and others, but still recognize it gets down to a capacity that we do not have that we could have fairly inexpensively, so I would like to ask if you would spend some time talking about this with Admiral Clark.

General FRANKS. I will, Senator, yes, sir.

Senator INHOFE. Thank you very much.

General FRANKS. Yes, sir.

Chairman WARNER. Senator, I want to thank you. I was going to follow on that same line of questioning, because as soon as I heard about that tragic accident on that bombing range, the first thing that occurred to me was whether or not that accident could in some way be traced back to what we understand is a shrinking ability of the Navy to properly train the deploying units to that region to face the rigors of the combat in which the aviators, certainly, and to some extent others, are immediately injected, and you said, of course, the *Truman* got the inert training. Was it a full range of inert training, or was that even curtailed?

General FRANKS. Sir, I cannot answer the question. I am not sure what the full breadth of the training they received in Vieques was, but I know that they were able to do close air support, and I know that they did use inert munitions as they did the training.

Chairman WARNER. What about the next carrier task force being deployed? What is the status of that training?

General FRANKS. That training is not going to be done in Vieques, as I understand it, from information that I read this morning.

Chairman WARNER. That is my understanding also, so I think, Senator Inhofe, these are matters which you are going to have to bear down on in your Readiness and Management Support Subcommittee.

Of course, we are also advised that there are shortfalls in shipmates on some of these deploying ships. I think it is a matter that this committee is going to have to look into with greater intensity.

Do you think in any way that freak accident on the bombing range could be attributed to the inability of live fire training? He was off the *Truman*, was he not?

General FRANKS. He was off *Truman*, affirmative.

Mr. Chairman, as you and I discussed yesterday, I do not want to speculate on it. In terms of, as we pull the thread out of the ball of yarn and look to see whether we had the right level of training competencies, I would prefer to hold an opinion on that.

Chairman WARNER. I can fully understand that.

Senator Carnahan, Senator Smith, and others talked about Iraq—indeed, Senator Levin raised in his opening questions Iraq, but there is another note of irony about this policy. I know it affects your military commanders a great deal. I remember from my own modest experience when I was a ground officer with a combat operation in Korea, our pilots were flying missions when the peace talks were taking place at Panmunjong, and they were saying, "why am I taking this risk at the same time peace talks are taking place."

To some extent, there are no peace talks taking place as far as I know on Iraq right now. I respectfully urge our President to convene the coalition of nations that brought about the cessation of hostilities in 1991 in the Gulf and say, now, look, if you have a better idea as to how to continue the containment of Saddam Hussein and limit the proliferation of his desire to use mass destruction weapons, then tell us what it is. If you have not got a better idea, then I guess the United States and Britain are just going to have to carry on as best we can see, and stop the criticism.

But the other aspect of it is, we are facing an energy crisis in this Nation, whether it is in the California region, or we are told that on the east coast we are going to experience brownouts in the heat of the summer. Therefore we are looking for all possible sources of energy, and at the same time we are flying these missions in Iraq we are buying Iraqi oil to meet our own energy needs. Am I not correct about that, General Ralston?

General RALSTON. Yes, sir, you are correct.

Chairman WARNER. You have been in that combat situation as a young aviator. What does your aviator think about carrying out a high risk mission of containment at the same time the United States is buying the oil, as one of our colleagues, in a very colorful

and I think factually correct way said it, we use that oil? Indirectly some of it could get into the very gas tank of the airplane flying the mission that bombs Iraq.

How do we deal with that? When you sit down to talk with them, as I am sure you do, do your young pilots raise that issue with you?

General RALSTON. Yes, sir. Our young aviators that we have out there are well-educated, bright young men and women.

Chairman WARNER. Indeed they are.

General RALSTON. They also are very dedicated. If we tell them this is the mission that they are to go do, then they salute, and they go do that with great dedication.

What they really need is to make sure that the administration and Congress and the American people are behind them. If they believe that, they will do anything that we ask them to do, and so that is why I think it is appropriate that the administration go through their policy review, and then whatever that policy is that comes out the other end, we should not be in the military the tail wagging the dog on this. We need a policy, and then tell us what it is, and tell us what our role is, and we will do that and the young men and women will respond admirably.

Chairman WARNER. Well, that is always the way it has been, but it has to be in the minds of those aviators that the very cars back home are using Iraqi petroleum.

General FRANKS. I think, Mr. Chairman, and I know you are aware of this, but with this being a public hearing and on the record, I think my personal view is, the purchase of this percentage of Iraqi oil is entirely appropriate, because under the oil-for-food program, under the existing rules for the purchase of this petroleum, I think that what this does is send a signal that says that the purpose of our policy is not to punish the people of Iraq.

The purpose of our policy is to assure that Saddam Hussein does not have an opportunity to put unencumbered money in his own pocket for the purpose of building his military organizations, and for the purpose of reconstituting his weapons of mass destruction.

So, Mr. Chairman, I wanted to say that, because I believe the young men and women who are involved in Operation Southern Watch, as well as this maritime intercept operation we have ongoing, are very much aware of that, yes, sir.

Chairman WARNER. If we ever experience the misfortune of a downed aviator, and he is marching or being dragged through the streets of Baghdad, stand by. I think a lot of the public have not focused on this. Some of our allies, including Turkey and Jordan, who are participating in getting some of those hard dollars into Saddam Hussein's pocket, are very valued allies. So at the same time we are asking our pilots to put their lives in danger, our policy in this region is fractured in so many different ways. The pilot's total dedication does not seem to me to be matched by the total dedication of those who bear the burden of trying to resolve this conflict, which has dragged on for over 10 years.

General FRANKS. I agree, Mr. Chairman.

Chairman WARNER. General Ralston, this problem that we are seeing in Macedonia, do you see other areas of the bordering nations, particularly around Kosovo, experiencing some destabiliza-

tion—Montenegro, for example, as a consequence of their forthcoming elections—in the same way we are seeing in Macedonia?

General RALSTON. Yes, sir, Mr. Chairman. As you and I discussed, and as we heard in Greece when we were on our last trip, this area of the world has long been a clash between different civilizations, and it all comes to a head around the Balkans area, so clearly there is the potential for instability.

One of the issues that I think the committee needs to think about, the election upcoming in Montenegro on April 22. I think it is going to be very significant, because it is in large part going to indicate whether the people of Montenegro want independence from Yugoslavia. If so, and if that proceeds, then that will start another series of questions. What about Kosovo? Should they be independent or not, and what about the Republic of Srpska in Bosnia, should they be independent or not?

So it is, I think, a pretty profound event, that I know you are focused on. I am not so sure the American people are focused on this upcoming election on 22 April in Montenegro.

Chairman WARNER. I am glad you raise that, because again, it comes down to the risks in the deployment of our troops, the expenditures of this Nation, and it is still a very fragile situation.

General Franks, missile defense is very much a part of our initiatives here in Congress and, indeed, certainly our President. How do you rate Iraq's current ability to employ ballistic missiles against U.S. forces and/or our allies in that region?

Saddam Hussein has the authority, under the accords that were drawn up at the time that that conflict was terminated, to go ahead with the production of missiles with a range that presumably only ensured his ability to defend his country. That same technology can be used to extend the range of those missiles, in my judgment, in relatively simple ways.

General FRANKS. Chairman Warner, I agree with exactly what you just said. We obviously have concern and should be concerned about missile development that is permitted to go on under the existing rules which allow for development as long as a range of 150 kilometers is not exceeded by those weapons. The issue for us is the possibility of doing solid propellant investigative work or scientific development of solid propellants which could perhaps at some point be used in weapons systems, missiles with much greater range. Sir, I share your concern.

Chairman WARNER. Senator Levin, I see our colleague, Senator Nelson has joined us just as I was beginning to ask the second round, so Senator Nelson.

Senator BEN NELSON. Thank you very much, Mr. Chairman.

General Franks and General Ralston, first of all I want to commend the 125,000 men and women under your commands, the 125,000 troops in harm's way for being so committed to peace in the world, and certainly to represent their country so admirably.

Senator Inhofe, before I arrived, mentioned something about the deplorable conditions of housing, and I know, General Ralston, you also made reference to that. Senator Inhofe and I in a hearing earlier this week received a lot of information about the inadequate housing situation for our troops. I am concerned to hear most of the discussion was about here at home as opposed to in foreign loca-

tions, so I hope that we are able to do something to help correct that. If we want a family-friendly and a military-friendly environment, housing is certainly going to have to be part of that.

My question here is, in the wake of the U.S.S. *Cole* tragedy as we have experienced concerns about the protection of our troops in foreign locations, with the ethnic extremism in Macedonia today, and the enormous border that you police, can you describe for us the steps that are being taken for security of our locations in that part of the world?

General RALSTON. Senator, if I may, that is an excellent question, and it is an issue that we spend a lot of time working, and I must tell you, I am probably more concerned about other areas than I am our troops that are in Kosovo, because in Kosovo they are focused on this every day. They are wearing their flak jackets and their helmets, and they are in patrols, and we constantly work on that issue. It is not risk-free, as we have mentioned before, but I think they do a good job on that.

Sometimes we forget that our forces that are living in England and in Germany and in Italy are far more vulnerable to a terrorist act than we would like to think about. We have had to go through several actions in the past couple of months in the U.K. and in Germany and in Italy and in Turkey, and I could go on and on, Belgium, no place is immune from potential terrorist acts. The bigger challenge is, these places that for many years have been considered very safe places, it is like living in Virginia or Maryland, and all of a sudden we find that is not true, so how do you keep the people focused on that, and how do you make sure that you can deal with the resource implications here?

In other words, if we were going to put the same level of security around our installations in Germany or in England as we are doing in Kosovo today, that is an enormous bill, and there are issues with host nation countries. How are we going to be able to do that?

So I know General Franks spends a great deal of time on this, as we both do, looking at all of the various airfields and all of the various ports that we have where our airplanes fly into and our ships go to refuel, so it is an enormously difficult issue. We try to work it with good intelligence.

It is less than perfect intelligence. I know that I probably get 15 messages a day from the intelligence community that say something is about to blow up in Europe. That is 450 a month, and you cannot disregard them. You have to look at every one of them, do the very best you can to say, is this real, or is this a false report, and how do you keep all the people down the line in the squadrons and in the battalions who get these same messages, how do you keep them focused that this is not somebody crying wolf?

I do not have a solution to that. I am not complaining about it, but I am trying to at least make people be aware of what we are trying to deal with on a day-to-day basis.

General FRANKS. Senator, if I could add to the same thing, I think one of the points General Ralston just made is a very important point, that point having to do with the specificity of intelligence.

As we looked at the U.S.S. *Cole* attack, and as we thought our way through ways and places where we can close seams and pro-

vide better force protection for our people, I actually directed a bit of an inquiry into the issue of threat information received. Senator, I will tell you that in the 12 months that preceded U.S.S. *Cole*, our headquarters received 127,000 messages that indicated, as General Ralston mentioned, that there was the potential for difficulty associated with our forces in this region.

To increase the specificity of this information, I will add to what General Ralston said, which is very important to us as we move through time. The business of bringing together agencies, improving our human intelligence capability, improving our ability to analyze the information we have, in my personal view, is a first major step, which our Defense Department is undertaking now, to move us in the direction of providing better force protection.

Now, sir, knowing that that is not precisely the intent of your question, I will talk a little bit about the military construction that we have going on in our area. We have more than 20 projects underway, and the chairman would remember when General Tony Zinni, my predecessor, came before the committee after the U.S.S. *Cole*, at the chairman's request and at the request of Senator Levin. General Zinni talked about waivers for force protection, and we have, in fact, about 20 of those associated projects across our area of responsibility, associated in some cases with the stand-off that we are able to provide from our installations and so forth.

So we have worked very hard, and the work did not begin with the U.S.S. *Cole*, and it did not begin with me. It has been ongoing for several years, to work our way through these places where we perceive that we have a problem. If you look at the money involved in this over the next 5 or 6 years, with the help from this committee, as well as from the other body, we have put about \$150 million to this task.

Now, interestingly, the host nations where we keep our forces, as the chairman rightly pointed out, in harm's way, have put about \$350 million to this task. So it is this work that I believe we need to continue over time that talks to quality of life, certainly, but force protection is a major piece of our quality of life effort.

Thank you, sir.

Senator BEN NELSON. Thank you very much.

Chairman WARNER. Thank you, Senator.

Senator Levin.

Senator LEVIN. Thank you, Mr. Chairman. First, General Ralston, about your comments on Montenegro. It seems to me from what I know of the history of Montenegro, Kosovo and Republika Srpska, and the other pieces of the Balkan puzzle, that we should differentiate between Montenegro and some of the other very complex areas.

It was independent for many years, so it has a history, or had a history of independence. Its vote is coming up. It will probably be a close vote, but nonetheless it will be a democratic vote. I think we should, number one, in light of its history of independence and in light of the fact that it may, in fact, opt for independence, or some variety thereof in the near future, that it may not be wise for us to suggest that there would be an unraveling in Kosovo or Republika Srpska or other areas should that event occur.

I am not an expert. I am far from it, on that history. But just from what I do know about it, I would simply say I think we should be a little cautious at least about kind of lumping some areas which have some different histories into one general commentary.

I will leave it at that. I more than welcome your comment on it, though.

General RALSTON. Senator Levin, I think you are exactly right, and I did not intend to imply a value judgment on the outcome of that vote. That is for the people of Montenegro and the people of the FRY to decide. I was merely trying to make the point that those issues will be in the debate. Whether they should or should not, I agree. I am not trying to make a value judgment on what it should be, but it will start a debate on those issues, was my point.

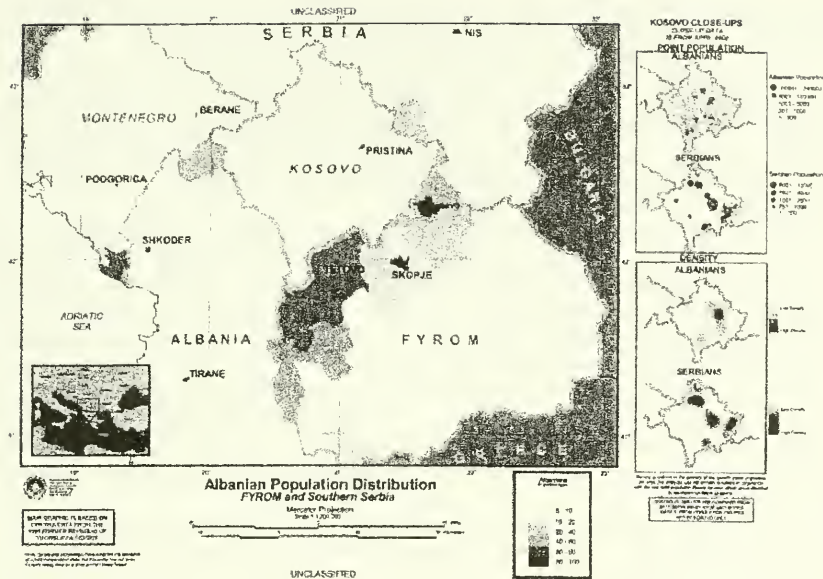
Senator LEVIN. But to help us in the debate, I think it would be probably useful to at least incorporate the fact that there are some differences in the histories of the areas. I am going to start doing some historical reading myself. I am really talking to myself more than to you, I think. I think it is important that we have at least the beginning of that historical background. I am again going to gain that for myself, in the event that that is what the people of Montenegro opt for.

On Macedonia, we have a very complicated situation there, General Ralston. We have the Albanian extremists, the rebels there who seem to have burst on the scene fairly quickly. I think there probably was plenty of advanced warning of what was happening. Nonetheless, from kind of a press perspective, or our perspective, it seems to have come quite suddenly.

In the Presevo Valley we have had a lot of attention focused on that problem, but now we have allowed the Yugoslav Army to enter a small area in that valley—apparently a 3-mile-wide ground safety zone on the border of Kosovo and Macedonia; agreed in principle to the entry of that army into a larger ground safety zone area; and then there's the question of what the limitations are on their presence, both the army and the special police, both in that narrower area into which they have been allowed, and into the border area.

Basically, if you could give us a thumbnail sketch as to how the situation is unfolding, what the dangers are, and how you see us responding to those dangers.

General RALSTON. Yes, sir. Let me ask for the chart. Put the chart up with the ground security zone on it.



While they are doing that, this ground security zone is a 5-kilometer-wide ribbon, if you will, that goes around Kosovo.

You can use that one, if they can see the green on it. The red probably shows up. The red area there is the ground security zone that goes around Kosovo, and as I say, this was instituted back in June 1999 as part of an agreement with the Federal Republic of Yugoslavia and NATO, and what it is, it was for the force protection of the KFOR forces.

We did not want the then-FRY army bringing their tanks and their artillery and putting it right up on the border where they could threaten the KFOR forces with no warning, so we said, you cannot have heavy weapons, tanks, artillery, VJ army forces in that 5-kilometer-wide zone.

Now, as we have gone through the democratic changes in Belgrade, starting last September and then again in December, with the parliamentary elections, and as the FRY and Serbia try to re-enter the international community, the chances of the VJ army attacking KFOR have declined tremendously.

The unintended consequence of this ground security zone, since we were not in there and the FRY military was not in there, was that the extremist elements set up camp in this free zone, if you will, and that was causing its own instability and its own threats.

So the North Atlantic Council has made the decision, as you mentioned, that we will do a phased and conditioned return of this ground security zone back to the FRY. Phased means a piece at a time, and we started with the first piece, which is the piece just north of the Macedonian border. That was done on the 13th of this month, 13 March.

There were certain conditions that were agreed to by the FRY before they did that, and I will not take you through all of them, but

basically it said, they will not bring tanks in there. They do not really need tanks in there to do that. They do not need self-propelled artillery and that kind of thing.

That reentry went very smoothly. They cooperated very well. They showed us their plans. There were phase lines as they came across. They reported in. The very last one, right up against the border, we have checkpoints, where our soldiers and their soldiers meet so that we are not shooting across the border inadvertently, so all those procedures are in place.

The North Atlantic Council is looking at the next phase of this, which will be most of the northern part of that, all the way around to the east border. That should happen, I would think, here in the next few days, and once again, if that goes well, then we will look at the more contentious area, which is over on the eastern border.

There is still some work to do, because once again this is not just a military problem, this is a political and economic problem as well, and in those areas in blue on that map, where the ethnic Albanian majority have been denied political access and economic access for a number of years, that needs to be addressed by the Serbian authorities.

But to summarize, I think the conditions in the so-called Covic Plan, which was the Serbian Deputy Prime Minister, said that the Serbian authorities would, in fact, give political access and some economic opportunities to the Albanian citizens, and we would give the Serbs access back to the ground security zone. I think that is working well. I think that is the proper approach. We need to keep working through this.

Chairman WARNER. Senator Inhofe, we have some people who have traveled a long distance, and their message is directly germane to the line of questioning that you raised with our witnesses earlier, so at this point in time I recognize you to proceed as you desire.

Senator INHOFE. Thank you, Mr. Chairman. General Franks, earlier in this hearing I brought up the fact that you are responsible for the quality of training of those individuals who serve in the Persian Gulf many times in a combat environment, and from the East Coast deployments where our battle groups go, we have learned sometime ago that there is only one place where you can get the integrated live training to give them that degree of competency to carry out those missions.

That is the island of Vieques and, because of the problems that have come up, starting about a year ago, we have been inhibited from having the freedom to carry on the live fire training on this island, on this land that is owned by the United States Navy.

In fear that we would lose this, I took the time to go around the world, look at every possible alternative source, including Capa del Lata and Cape Rath and all the rest of them, and there is none. In fact, they are becoming fewer and fewer as each month goes by.

For that reason, I have spent quite a bit of time in Puerto Rico, and then actually on the island of Vieques. A lot of people do not realize, Mr. Chairman, that Vieques is a municipality of Puerto Rico. It is not a separate system, it is a town, but it is an island.

I had the occasion to go over to the island and actually visit with the citizens, and I did this, Mr. Chairman, for one very significant

reason, and that is that I had heard all the opposition from the politicians on Puerto Rico, but I had not heard it from the citizens who were directly affected, who live on the island of Vieques.

Let us keep in mind there are 9,300 residents in Vieques. Of that, there would be something less than 4,000 registered voters in Vieques. The way the law is currently structured, it is very likely that there could be a referendum as to whether or not they want the Navy to continue live fire. Obviously, if it turned out the wrong way, our presence and our activity on the whole island of Puerto Rico would be diminished.

But I think it is very significant, Mr. Chairman, as I introduced you to the group out in the hall, to recognize that in my trips to Vieques, I have met with these citizens, only to find that the majority of the citizens on the island of Vieques that would be directly affected—not the politicians in Puerto Rico, but the citizens—like the Navy, by and large.

They recognize that the Navy needed some improvement, they have improved the relationships, and they are satisfied with it. They recognize the economic benefit to the people of Vieques, and I invited them to come here to the United States, to Washington, so that we would be able to see what the real people on Vieques want.

The leader of the delegation, Mr. Chairman, is Luis Sanchez. I met with these people on the island of Vieques.

Chairman WARNER. Senator, I think it would be important if they came forward.

Senator INHOFE. Would you come forward at this point. You have all of your petitions with you. If you would come forward to this side of the table so we can see you, as I saw you in Vieques. The second gentleman there is Luis Sanchez, who is the leader of the group, and these are all citizens.

They are carrying with them, Mr. Chairman, over 1,700 petitions, signatures of registered voters on the island of Vieques. On those, they have listed their names, addresses, and social security numbers and registrations of all 1,700. As you can see, this almost constitutes a majority of everyone who lives on the island of Vieques. I thought it was significant that, since I could not get anyone to listen to me back here on what the people of Vieques want, as opposed to the politicians on Puerto Rico, that they come forward and show this.

If you just put those on the table there. I am not sure whether it would be in order or not, Mr. Chairman, I would defer to you on that, but if you would like to hear from any of them, or if you would like to ask questions of these individuals—

Chairman WARNER. Well, I think that you and I should first indicate that a copy of one of these petitions will be incorporated into today's record. This clearly indicates that there is a very substantial number of the citizens of Vieques who support the ongoing naval operations that existed when I was Secretary of the Navy, many years ago, 30-plus years ago. This training is so essential, as General Franks has recounted today, to preparing elements of the Navy and the Marine Corps for going into harm's way, that this is a clear manifestation of the desire of those people to work with

the United States Government and particularly our military to resume that training as it was performed for many years.

[The information referred to follows:]

VIEQUENSES



PRO-MARINA

Luis E. Sánchez
PRESIDENTE

Yo _____ residente del pueblo de
Vieques con el número de seguro social # _____. Mi
dirección residencial _____ y teléfono
_____.

Quiero hacer constar mi respaldo al Movimiento Viequenses Pro-Marina en
defensa de la permanencia de la Marina en Vieques.

Firma

Entrevistador

Propuesta

1. Mejorar sistema de transportación Marítima.
2. Servicios médicos de excelencia.
3. Programas especiales para la juventud y niños.
4. No arbitrio a la gasolina en Vieques.
5. Proyectos de vivienda.
6. Pases para entrada a la base.
7. Mejores servicios para los ancianos.
8. Promoción de nuevos empleos.
9. Mejora en las carreteras e infraestructura.
10. Asignación de fondos directamente a Vieques.
11. Promover escuelas bilingües en Vieques.
12. Hogares de rehabilitación para la adicción a drogas, alcoholismo, etc.

Senator INHOFE. Mr. Chairman, I know that when you were Secretary of the Navy you had an appreciation for what was going on over there, but let me clarify. It is much more significant than just these individuals. 1,700-plus are supportive of the Navy. All of

these people are signing a petition saying, if necessary, they would secede from Puerto Rico and become a separate entity and vote themselves out so that they would be able to do what has been taking place since 1950, in terms of supporting the Navy, and offering us the kind of training that gives us the quality that we need in that war-torn region of the Persian Gulf.

I think it would be significant, Mr. Chairman, if each one gave the recorder his name so that we would be able to properly enter them into the record.

Chairman WARNER. We will see that that is done.

[The information referred to follows:]

Mr. Luis E. Sanchez

Mr. Ralph Perez

Now, Senator, I think what we are going to do, unless there are further comments from yourself or our other colleagues, Senator Levin and I are recommending that this committee stop this open portion of the hearing. We will resume a classified session in room 222 Russell immediately.

Senator INHOFE. Thank you, Mr. Chairman.

Chairman WARNER. Thank you very much.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR RICK SANTORUM

ARMY TRANSFORMATION GOALS AND OBJECTIVES AND STRATEGIC LIFT

1. Senator SANTORUM. General Ralston and General Franks, the Army has initiated a transformation process that is designed to result in a lighter, more deployable and mobile force. Recognizing the Army will provide you with the bulk of your ground force should military action be required in your theater of operations, what are your views of the Army Transformation goals and objectives? To what extent has the Army initiative addressed concerns you might have about strategic responsiveness? Do we have the strategic lift assets required to execute established deployment goals and objectives?

General RALSTON. There is high probability that, in the USEUCOM AOR, there will be repeated demands at the center of the spectrum of conflict, as well as the possibility of high intensity small-scale contingencies. USEUCOM has been engaged in 25 operations since October 1996. The average number of operations per year has doubled since the years 1991-1995.

Responding to this reality, the Army has articulated a new vision for a strategically responsive and dominant force to effectively meet the full spectrum of future military operations.

A key benefit for USEUCOM is the ability to rapidly move lighter vehicles within the theater. As a potential force provider to other unified commands, most notably U.S. Central Command, future commanders will find that enhanced mobility of the Transformed Army also enhances deployability. The capability to deploy within a matter of hours to trouble spots in Africa and less developed countries of Eastern Europe offers a range of options that are simply unavailable today.

The operations conducted by USEUCOM over the past decade have required the use of ground forces that are not necessarily structured or equipped for small scale contingency operations. The two divisions in Europe must meet this standard of responsiveness and strategic dominance by resourcing the training, exercises and infrastructure that support strategic mobility. Only through proper resourcing of our two divisions will this Objective Force be able to provide the deployability, maneuverability, and lethality necessary to conduct operations throughout the full spectrum of conflict.

The current level of strategic lift assets is not adequate to meet the full range of requirements, primarily due to identified intra-theater lift joint requirements and to the consideration of missions additional to those directly supporting the two major theater war scenario. In accordance with Mobility Requirements Study 2005, DOD should develop a program to provide 54.5 MTM/D (Million Ton Miles per Day), the airlift capacity for a single major theater war while supporting other high priority airlift missions. The program should consider capabilities that could be provided

by additional C-17s, additional services that could be provided by commercial operators, and sources that could be useful for missions of short duration.

General FRANKS. I support any and all efforts by each of the services to increase the deployability and mobility of combat forces. Having few assigned forces within the CENTCOM AOR, I rely on the rapid deployment of forces to meet contingency requirements (as long as the U.S. Army keeps them modernized and sustainable). The faster lethal, survivable and sustainable ground forces deploy, the more likely it is that I can successfully protect and defend United States interests in the region. [Deleted].

The Army's pre-positioning system gives CENTCOM adequate strategic responsiveness for responding to the region's major theater war threats. The Army transformation initiative will enhance my command's ability to meet smaller scale contingencies, especially if urban operations are required. CENTCOM however, has not participated in any qualitative analysis pertaining to future force structure and deployment platforms.

All CENTCOM operation plans and concept plans are executable. However, risk within some of these plans remains high in the early phases, in the large part due to strategic airlift deficiencies. Given the distance to the CENTCOM AOR, the small number of assigned forces and still developing regional infrastructure, strategic lift is one of my concerns.

LAND FORCES MODERNIZATION

2. Senator SANTORUM. General Ralston, the Army currently provides the bulk of our forces in the Balkans, where they are serving our Nation very well in difficult circumstances. These operations are clearly stressing the equipment we have in the region and there appears to be no relief in sight. What are your concerns regarding the modernization posture of the land forces you have at your disposal? Based on what you see in the land forces that are currently deployed, where would you focus modernization efforts to ensure that our forces have the best, most modern equipment available?

General RALSTON. Based on U.S. Army, Europe's (USAREUR) experience in the Balkans, the gap between the equipment in the active Army and the Reserve Army is widening, particularly the equipment in the War Reserve Stocks/Army Prepositioned Stockage (APS).

To take some examples, Bradley fighters in the APS are older than Operation Desert Storm, there are shortages of Single-Channel Ground and Airborne Radio Systems (SINCGARS) radios and installation kits, fielding delays of rolling stocks, including Family of Medium Tactical Vehicles (FMTVs) and Light Medium Tactical Vehicles (LMTVs), as well as our 800-series trucks being over 40 years old. The bottom line is that when CONUS-based units come to theater, they train with obsolete APS/War Reserve equipment, and training suffers accordingly.

TACTICAL MOBILITY OF WHEELED VEHICLES IN DESERT

3. Senator SANTORUM. General Ralston, the Army is in the process of fielding an interim force that is designed to span a perceived near-term operational shortfall first recognized during the Persian Gulf War. To that end, the Army recently selected a vehicle to serve as the armored vehicle that will be used by interim brigade combat teams in operations from peacekeeping through full spectrum combat. There has been a lot of debate over wheels versus tracks for armored vehicles and I don't expect to conduct such a debate here. I am curious, however, about any lessons we may have learned in the Gulf about mobility tradeoffs between different vehicle types, especially in vehicles currently available in the world today. Put differently, what are your views about the tactical mobility of current generation wheeled vehicles in a desert environment?

General RALSTON. The Army's Interim Armored Vehicle (IAV) represents a good step forward towards properly equipping the lighter, more mobile, Army of the future. Wheeled vehicles have been used in the desert for years with excellent results. The Army's IAV will, in my estimation, enjoy the same excellent results as it becomes an integral piece of the Interim Brigade Combat Team (IBCT).

While there have been concerns about the IAV, primarily about the amount of protection (armor) and fire power provided in the new vehicle, I feel it is unfair to compare the IAV with traditional tracked-vehicle tanks, such as the M1A1 Abrams. The IAV was not designed to replace the M1, but rather to become an integral part of a more mobile, faster, lighter, IBCT. In other words, the IAV is more an augment

to the foot soldier of Army's Infantry forces, rather than a replacement for the heavy armor of the Army's Cavalry forces.

For a view of the issue from one who has a keen understanding of the desert environment as well as armored vehicles operating in combat, I recommend you ask General Franks, Commander in Chief Central Command, for his views.

READINESS LEVELS

4. Senator SANTORUM. General Ralston and General Franks, in your respective AORs you are responsible for the continuing commitments of Operation Northern Watch (ONW) and Operation Southern Watch (OSW). These operations continue to require rotational deployments and large numbers of tactical aviation sorties flown by an aging fleet of tactical fighters. Do you see any indicators in your theaters that readiness levels of our tactical air forces are declining?

General RALSTON. The majority of forces provided to ONW are from an Air Expeditionary Force (AEF). The balance is comprised of U.S. Navy, Marine Corps, and coalition forces. For the past 6 months, the majority of tactical aircraft used in ONW came from outside of our AOR. There are no indicators that the tactical aircraft assigned to the AEF to support ONW from outside our AOR or our own organic tactical aircraft are suffering declining readiness levels. As you may know, the readiness indicators of many of our fighter aircraft have shown a recent increase as the funding for spare parts in fiscal year 1998, 1999, and 2000 has begun to take effect.

General FRANKS. The Services support Operation Southern Watch by deploying a wide variety of aircraft including tankers; theater airlifters; intelligence, surveillance, and reconnaissance platforms; combat search and rescue assets; and several types of fighter aircraft. At their current level of activity, U.S. air forces combine for over [deleted] sorties per year in support of Operation Southern Watch.

These forces, whether land or carrier-based, arrive in my AOR fully combat ready. On a regular basis they demonstrate superb readiness levels by responding to hostile Iraqi actions with strikes on Iraqi air defenses in the Southern No-Fly Zone. [Deleted.] From what I have seen, the Services are doing an excellent job bringing trained and ready air forces to the fight, and I have no doubts about their preparedness to perform the missions for which they are responsible.

HIGH DEMAND/LOW DENSITY ASSETS

5. Senator SANTORUM. General Ralston and General Franks, during Operation Allied Force in Kosovo, one of the newly coined terms was High Demand/Low Density assets. If these assets were so highly tasked in this small contingency, doesn't that indicate we do not have enough of these assets to execute the National Military Strategy?

General RALSTON. The term High Demand/Low Density (HD/LD) was coined well before Operation Allied Force (OAF). In addition, it is my belief that OAF, from an air perspective, was not a small contingency. I believe that we do have the assets necessary to conduct the National Military Strategy—but that strategy says we will quit all operations around the world and devote all our assets to the two MTWs if we are required to fight two MTWs. During the Kosovo air operation we continued to support all our operations around the world—Operation Southern Watch, Operation Northern Watch, Korea, South America, peacetime training, etc.

General FRANKS. Senator, every geographic Commander in Chief places tremendous value on HD/LD assets. They perform unique missions and yield great operational benefits. Any time combat operations are ongoing, they will be needed continuously.

While General Ralston will undoubtedly give you the expert answers on Operation Allied Force, I would characterize it as more than a "small" contingency. Operation Allied Force placed virtually the entire burden of combat operations upon joint and combined air forces, causing them to fly sorties at relatively intense rates. Moreover, the allies considered it imperative to avoid collateral damage and minimize friendly losses, causing heavy use of HD/LD assets to gather intelligence and protect our aircraft. Given these factors, the call for HD/LD assets is understandable.

Keep in mind also that Operation Northern Watch and Operation Southern Watch continued during Operation Allied Force, as well as other operations to monitor countries like North Korea. In other words, HD/LD assets performed global missions in addition to Operation Allied Force. Had another contingency arisen, the National Command Authorities could have diverted HD/LD assets from these other operations if mission priorities so dictated.

The bottom line is that judging whether we have enough HD/LD assets is a complex question, and the Operation Allied Force case alone doesn't lead to a definitive conclusion. The Secretary of Defense and Chairman of the Joint Chiefs of Staff are better positioned to respond to the issue of resourcing the National Military Strategy, and may be better able to discuss HD/LD assets with you.

QUESTIONS SUBMITTED BY SENATOR WAYNE ALLARD

TRAINING, EQUIPMENT READINESS, AND RETENTION

6. Senator ALLARD. General Franks, for several years now we have maintained a military presence in the Persian Gulf region. Units include naval forces enforcing sanctions, air forces enforcing the no-fly zones, and soldiers in Kuwait. How are these missions affecting the training and equipment readiness of the units involved? What is the effect on retention of personnel?

General FRANKS. You are correct that the Services support operations in the Arabian (Persian) Gulf region with significant resources, including over [deleted] personnel, [deleted] aircraft, and [deleted] naval vessels on any given day. These forces arrive in my AOR fully combat ready and well-equipped to sustain operations as needed.

My component commanders exploit every opportunity to provide quality training for deployed forces whenever possible, consistent with operational responsibilities. Some of that training, such as the land force training integral to Operation Desert Spring, includes opportunities for combined operations and live fires that deployed units do not always get at home. From what I have seen, the Services are doing an excellent job bringing trained and ready forces to the fight, and we do our best to keep them that way.

If you need more information on what goes into training, equipping, and retaining our troops, the Service Chiefs are better positioned to address these issues.

MILITARY OPTIONS AGAINST SADDAM

7. Senator ALLARD. General Franks, what military options are available to curtail Saddam's ability to circumvent UN sanctions? What military options are available to affect Saddam's efforts to research, develop, and produce weapons of mass destruction and ballistic missiles?

General FRANKS. The options span the breadth of military capabilities from passive monitoring of Iraqi actions to applying combat forces using kinetic solutions against Iraqi sanction violations. Operation Southern Watch and Operation Northern Watch are ongoing efforts aimed at keeping Saddam from circumventing specific UN resolutions. Operation Desert Spring, which keeps a joint task force in Kuwait, exists as a hedge against Iraqi circumvention of other sanctions. Maritime Interception Operations in the Gulf deny international waters to Saddam's effort to circumvent UN sanctions. Other contingency plans exist that use various military capabilities to hinder any Iraqi circumvention or respond to violations.

Saddam's knowledge of United States military intelligence capabilities has forced him to go to great lengths in concealing his ballistic missile and weapons of mass destruction (WMD) development programs, driving up the costs of these efforts and slowing their progress. Additionally, Iraq remains dependent on foreign supply of some raw materials and advanced technology. Our military capability to interdict shipments of sensitive cargoes could potentially hamper Iraqi WMD and missile development even further. Our ability to target key research and production nodes, as demonstrated in Operation Desert Fox, can set back Baghdad's advanced weapons programs for limited periods. Ultimately, without an in-country disarmament regime, consisting of active and passive surveillance systems, routine and intrusive inspections, and export/import controls, Iraq is otherwise unhindered from reconstituting its unconventional weapons capabilities.

ARMY INTERIM FORCE AND OBJECTIVE FORCE

8. Senator ALLARD. General Ralston and General Franks, in your statements, both of you mentioned a strong support for the transformation of our military. You specifically mentioned a support for Army Transformation. How do you see the Interim Force impacting your command? How do you see the Objective Force impacting your command?

General RALSTON. Interim capability is far better at meeting my small scale contingency (SSC) requirements than the current legacy ground formations. The in-

terim formations are far more tactically mobile and considerably more lethal than light units—they can serve just as effectively as a deterrent in these environments and will not require near the logistics support of Legacy formations. Bottom line: interim is a win-win for the less than very high-end operations that I routinely conduct in my AOR.

However, there exists a strategic gap between SSC mission requirements and the theater's force structure design. The heavy forces within the theater currently do not provide the optimal level of responsiveness required to support SSCs. A forward deployed Interim Brigade Combat Team/Interim Combat Regiment would greatly enhance CINCEUR's response options for SSCs and will address the risk inherent in the strategic gap created by the theater's current force structure until the Objective Force is fielded.

Objective capability will provide many more options than are available to me today. I can deploy and employ these formations quicker and the situational understanding inherent in the Objective Force and its full integration within the joint force can reduce collateral effects associated with conflict. Further, by means of its introduction deeper into the battlespace (enemy rear) the objective capability will contribute to faster conflict resolution.

General FRANKS. The Interim Force adds capability that did not exist before. The Interim Force increases the lethality and mobility of light forces which are more easily deployed and sustained than heavier forces. This type of force is well-suited for deployments over long distances into regions with still developing infrastructures, such as those in the United States Central Command's AOR. I envision the Interim Force having a potential in smaller scale contingencies, especially operations in urban areas.

Overall the Objective Force supports our war plan requirements, though the transition to the Objective Force needs to be managed carefully. The major threats in the Central Region still possess a significant heavy ground capability. This threat, the short indications and warning available, and the significant distances that must be traveled requires an Army preposition system that can match trained forces to compatible pre-positioned equipment capable of surviving and defeating this heavy threat. The Objective Force must also validate that its enhanced reconnaissance, surveillance, and target acquisition capability increases the lethality and survivability of transformed Army units against tank heavy opponents.

INTELLIGENCE SUPPORT

9. Senator ALLARD. General Ralston and General Franks, what are your most significant shortfalls in the intelligence and communications infrastructure? Do you have sufficient satellite communications capability? What must we do to ensure we have the capacity and flexibility to support mission-essential communications in the next 5 years? Ten years? Fifteen years?

General RALSTON. Our growing dependence upon information services and network-centric command and control to shorten decision times and improve force protection capabilities is fundamentally changing our intelligence and communications requirements. These changes will tax the ability of the intelligence community to rapidly adapt collections and analysis priorities to keep pace with the evolving requirements. They will also outstrip the capacity of the existing theater communications infrastructure.

Theater intelligence production is augmented by national intelligence agency support that is critical to our operational forces and engagement strategies. The unique production support provided by national agencies places a tremendous demand on the communications architecture. The National Imagery and Mapping Agency (NIMA) efforts to provide a robust IMINT Tasking, Processing, Exploitation, and Dissemination (TPED) system remains one of our greatest concerns. As the recent congressionally-directed NIMA Commission concluded, NIMA is under-resourced overall, and the U.S. cannot expect to fully realize the promise of the next generation of IMINT satellites unless NIMA TPED is adequately funded.

In order to deliver the time-critical intelligence produced at the theater and national level, USEUCOM is dependent upon a Command, Control, Communications, and Computer Systems (C⁴) infrastructure that is routed through networks built largely in the 1940s and 1950s to support low-bandwidth voice service. These problems are even worse south of the Alps and in the Balkans, while Africa suffers from a near total lack of communications infrastructure, with only pockets of development in countries like South Africa. These shortfalls force a heavy reliance on already limited satellite communication networks. This system is insufficient to meet current and evolving high bandwidth demands such as worldwide command and

control video-conferences, live Unmanned Aerial Vehicle (UAV) video feeds, electronic tasking orders for our air and land forces, and full implementation of DOD's Global Combat Command and Control and Global Combat Support Systems. These systems form the foundation of USEUCOM's command and control capabilities. Furthermore, current infrastructure does not support Information Assurance (IA) measures, potentially allowing our collection, analysis, dissemination, and command and control functions, to be jeopardized by hostile or inadvertent interference. Finally, USEUCOM's satellite communications lack flexibility and its capacity is extremely limited.

This infrastructure needs to be replaced with modern high-bandwidth capability within the next 5 to 7 years if we are to realize the full potential of the "information dominance" that will come from the interaction of superior intelligence and information infrastructures.

General FRANKS. With regard to the intelligence infrastructure, significant shortfalls include: shortages of airborne reconnaissance platforms and supporting systems; an intelligence, surveillance, and reconnaissance (ISR) capability to locate, track, and target mobile missiles; inadequate number of imagery analysts, intelligence specialists, and systems maintenance personnel; incompatibilities between Service, Joint, and Coalition intelligence systems; lack of an end-to-end ISR information management system; and inadequate intelligence support to information operations. These have been identified as deficiencies via the Joint Monthly Readiness Review (JMRR) and ISR Joint Warfighting Capability Assessment (JWCA) processes.

Regarding communications infrastructure shortfalls and satellite communications, no, sir, I do not have sufficient satellite communications, nor do I have sufficient theater communications infrastructure for daily operations or to support a contingency. The lack of adequate communications infrastructure and capacity into and within the area of responsibility (AOR) severely limits the successful dissemination of mission-critical products to the warfighter. Fiber optic connectivity is expanding in some of the key AOR countries (e.g., Kingdom of Saudi Arabia (KSA), Kuwait, Bahrain, Qatar), however, inadequate funding limits CENTCOM's ability to exploit this medium. So, I must rely on over-taxed military satellite communications incapable of providing the required increases in connectivity should a crisis in the CENTCOM AOR arise. Our theater and headquarters communications infrastructure is my number two priority item on my IPL and for good reason. We need the infrastructure to ensure we can selectively respond to the full spectrum of military options and sustain our forces to prepare for an uncertain future.

In the next 5 years, assistance with increased funding to exploit available fiber and build an adequate C⁴ infrastructure in the AOR would reduce CENTCOM's over-dependence on satellite communications and improve reliability and redundancy for critical intelligence and command and control voice, data, and video connections. In the next 10 to 15 years increased bandwidth and modern, reliable, and adequately provisioned networks will be critical as new ISR and C² systems are fielded.

QUESTION SUBMITTED BY SENATOR JOSEPH I. LIEBERMAN

IMPORTANCE OF JSTARS

10. Senator LIEBERMAN. General Ralston and General Franks, for the last 3 years, Congress has added funds to continue procurement of the Joint Surveillance Target Attack Radar Systems' (JSTARS) aircraft moving the fleet size toward the Joint Requirements Oversight Council (JROC) requirement of 19. Would you please give us your view of the importance of that system to the U.S. Central Command?

General RALSTON. The JSTARS' ability to acquire, monitor, target, and report ground force movement has proven crucial to supporting combat operations and maintaining situational awareness during high-intensity contingency operations in the USEUCOM AOR. JSTARS has deployed to USEUCOM three times over the past 6 years: 1995, Implementation Forces' (IFOR) move into Bosnia; 1996, Operation Joint Endeavor monitoring of the Dayton Peace agreement; and 1999, Operation Allied Force in Kosovo. Each of these deployments highlighted JSTARS' ability to provide near real time (NRT) indications and warning, force protection, situational awareness, airborne command and control, attack support, and intelligence collection to commanders. JSTARS' ability to incorporate data collected by other sources, and subsequently linked to the aircraft, to create fused analysis has been critical to the positive identification of the targets and movement it monitors. This was particularly important during the Operation Joint Endeavor deployment where

the system monitored fixed garrisons and the movement of small groups of vehicles within civilian traffic. The adaptive use of crew and external sensor input via satellite communication has proven JSTARS' effectiveness in complex, high-intensity EUCOM contingency operations.

General FRANKS. JSTARS provides an operational joint airborne command and control (C²) platform and tactical/operational intelligence, surveillance, and reconnaissance (ISR) capability. These capabilities provide JSTARS subscribers a terrestrial picture with excellent moving target fidelity and unparalleled air-to-ground battlespace C² and surface situational awareness. Close air support, combat search and rescue, and moving target information distribution are evolving capabilities provided by JSTARS. Additionally, the Navy and Marine Corps have recently purchased ship-based receiving systems to monitor littoral operations which, if netted with the Army and Air Force systems, could produce an even keener operational surface picture and an enhanced air-land C² structure in and around the Arabian Gulf.

I strongly desire to validate the importance of JSTARS to U.S. CENTCOM with a deployment to the Arabian Gulf region. The last time JSTARS was in CENTCOM's AOR was in early 1998 during Operation Desert Thunder. The lack of available aircraft and difficulties obtaining diplomatic permissions have delayed efforts to deploy JSTARS into the CENTCOM AOR this year. Nevertheless, my air component continues to plan for a JSTARS deployment this fall.

QUESTION SUBMITTED BY SENATOR BILL NELSON

CENTCOM HEADQUARTERS

11. Senator BILL NELSON. General Franks, there has been some discussion about the possibility of relocating U.S. Central Command headquarters from its current location at MacDill Air Force Base, Florida to an undetermined location within your Area of Responsibility in Southwest Asia. Given recent terrorist attacks, and the continuing threats in the region, this raises understandable concern regarding force protection for members of your headquarters and their families. At the same time there is understandable concern over the "7,000-mile commute" members of your command must endure when traveling to and from the area. What are your thoughts on the issue of your headquarters' location and moving it to Southwest Asia? What steps can be taken to mitigate the challenges of command and control from the United States and avoid increasing the risks to members of your command by increasing our physical presence in that region?

General FRANKS. There are currently no plans to relocate the CENTCOM headquarters from Tampa to Southwest Asia. Ideally, any commander would want to be located in his AOR but the political situation and existing infrastructure in the region make this unfeasible for the foreseeable future.

CENTCOM compensates for the separation from its AOR several ways. CENTCOM conducts day-to-day operations in the region through the command and control of four forward-deployed headquarters elements on the Arabian Peninsula. These are the Joint Task Force-Southwest Asia, responsible for air operations in the southern no-fly zone; the Combined Joint Task Force-Kuwait, responsible for the ground defense of Kuwait; Special Operations Command Central (Forward), responsible for all of our Special Operational Forces in the northern Red Sea, Arabian Gulf, and Horn of Africa; and Naval Forces Central Command (NAVCENT) in Bahrain, responsible for all maritime operations in CENTCOM. NAVCENT is CENTCOM's only forward-deployed service component headquarters.

This command and control structure has proven itself a capable and robust substitute for a forward-deployed CENTCOM headquarters. Technology is the enabler in this process by providing ever increasing "reach back" and even "reach forward" capability for communication between Tampa and our forward headquarters elements. My staff strives to employ the latest technology not only to move information swiftly but also to provide redundancy to work around the loss of key nodes or capabilities.

Currently there are four fixed locations in the region that are designated as possible CENTCOM forward headquarters locations, should a crisis or contingency require moving my battlestaff to the AOR. All are on the Arabian Peninsula and access to these facilities is not guaranteed in time of crisis. Consequently, we are developing a capability to rapidly deploy the battlestaff along with an air-deployable command post that provides the same command and control capabilities I have in Tampa or at any established headquarters in the region. There are over 100 C-5 or C-17-capable runways throughout the region where we could fly in this

deployable command post. The technology exists to do this right now; all we require is \$10.1 million in funding.

[Whereupon, at 11:42 a.m., the committee adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2002

TUESDAY, MARCH 27, 2001

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

UNIFIED AND REGIONAL COMMANDERS ON THEIR MILITARY STRATEGY AND OPERATIONAL REQUIREMENTS

The committee met, pursuant to notice, at 9:34 a.m., in room SH-216, Hart Senate Office Building, Senator John Warner (chairman) presiding.

Committee members present: Senators Warner, Smith, Inhofe, Santorum, Sessions, Collins, Levin, Kennedy, Cleland, Landrieu, Akaka, Bill Nelson, E. Benjamin Nelson, and Dayton.

Committee staff members present: Romie L. Brownlee, staff director; Judith A. Ansley, deputy staff director; and Scott W. Stucky, general counsel.

Majority staff members present: Edward H. Edens IV, Gary M. Hall, Carolyn M. Hanna, George W. Lauffer, Thomas L. MacKenzie, Joseph T. Sixeas, and Cord A. Sterling.

Minority staff members present: David S. Lyles, staff director for the minority; Richard D. DeBobes, minority counsel; Richard W. Fieldhouse, professional staff member; and Peter K. Levine, minority counsel.

Staff assistants present: Kristi M. Freddo, Shekinah Z. Hill, and Suzanne K.L. Ross.

Committee members' assistants present: Dan Twining, assistant to Senator McCain; Margaret Hemenway, assistant to Senator Smith; J. Mark Powers, assistant to Senator Inhofe; George M. Bernier III, assistant to Senator Santorum; Robert Alan McCurry, assistant to Senator Roberts; Arch Galloway II, assistant to Senator Sessions; Kristine Fauser, assistant to Senator Collins; Menda S. Fife and Sharon L. Waxman, assistants to Senator Kennedy; Barry Gene (B.G.) Wright, assistant to Senator Byrd; Frederick M. Downey, assistant to Senator Lieberman; Andrew Vanlandingham, assistant to Senator Cleland; Jason Matthews, assistant to Senator Landrieu; Elizabeth King, assistant to Senator Reed; William K. Sutey, assistant to Senator Bill Nelson; and Sheila Murphy and Eric Pierce, assistants to Senator Ben Nelson.

**OPENING STATEMENT OF SENATOR JOHN WARNER,
CHAIRMAN**

Chairman WARNER. Good morning. We hold our second series of hearings to receive testimony on the status and requirements of our regional commands. We do that in this committee each year. It provides us a basis of fact upon which we can then proceed to have our long and lengthy series of hearings on the authorization bill.

Last Thursday, the committee heard from Gen. Joseph Ralston, Commander in Chief, U.S. European Command; and Gen. Tommy R. Franks, Commander in Chief, Central Command. Today we are pleased to have Adm. Dennis C. Blair, United States Navy, Commander in Chief, U.S. Pacific Command; Gen. Peter Pace, United States Marine Corps, Commander in Chief, U.S. Southern Command; and Gen. Thomas A. Schwartz, United States Army, Commander in Chief, United Nations Command/Combined Forces Command and Commander, U.S. Forces Korea.

I would like to just focus on concerns that this Senator has with respect to issues in each of your AORs. In the Asia-Pacific region, China remains a growing concern. Each year there is another incremental set of facts that I think directly impacts on our planning here. First, our line of deterrence, our effort to work with our allies and friends in that region to maintain peace and tranquility, but we note that China will increase its defense budget by nearly 18 percent this year.

I would hope, Admiral, in your testimony you can give us the baseline on which that 18 percent is predicated. Very often we see significant increases like that, but if you go back to the baseline, in real terms so to speak, there is not that much. But that is an issue which I have studied, and I would like to have your perspective on exactly what you believe the 18 percent represents.

This dramatic increase in spending, which will enable the further acquisition of many advanced weapons systems, I presume many coming from Russia, and the positioning of additional short-range ballistic missile launch sites within range of Taiwan are matters we have to take into consideration.

At this point, I am going to do something that is unusual, but I have studied it several times, and I will provide each of the witnesses with a copy, and that is the *Washington Post* editorial of March 25, titled the Taiwan Arms Decision. In reading that, it comports generally with my approach and philosophy towards this issue.

You have just returned, Admiral Blair, from a trip to China, South Korea, and Japan, and therefore your insights are of particular value.

Under statute and law, the administration is to consult with Congress regarding the annual review of the Taiwan arms situation and their ability to defend themselves. Representatives of the Departments of Defense and State have come up and briefed. I can testify on this side. Yesterday I had a special briefing for members of the committee on that subject.

The situation on the Korean Peninsula remains very volatile and extremely dangerous. Over the past year, while there appeared to be some approachment towards lessening the tensions between the

north and the south, the fruits of that effort remain to be seen in my judgment because we view the actions, as well as the words, and the actions reflect that North Korea took no significant reduction in any of its massive number of troops deployed in that border region. Perhaps you will touch on that, General.

In light of our relationship with South Korea, it is a very important one, critical to the overall posture of deterrence in the region of the Pacific, and we look forward to your update. 37,000 U.S. troops—I think that is the number—are stationed in South Korea. Accompanying them are many families, and we have many industrialists and others from the United States. So, we should always be mindful that very significant numbers of our own population are right there within the range of weapons.

Now, in SOUTHCOM, the situation in Colombia and its bordering nations is, of course, of great concern. We had an opportunity to visit last night with the senior staff, and we want to hear from you this morning with regard to your view of that situation down there. I take note that my distinguished colleague, the ranking member, traveled there with other Senators recently, as did our colleague, Senator McCain.

We continue to support the efforts of the previous administration with regard to the \$1.6 billion U.S. aid package. I say we. I speak for myself and I think the majority of this committee. But the precariousness of that situation, and particularly the spill-over effect on the adjoining nations, is of concern to us. We have our own military personnel there now in the position of training.

These are just some of the issues, and we should have, I think, a very informative and profitable hearing from our distinguished witnesses this morning.

If you will forgive my voice. It is not up to prime time, but I am still here in every respect. Thank you. At this time, without objection, I submit the opening statement of Senator Strom Thurmond.

[The prepared statement of Senator Thurmond follows:]

PREPARED STATEMENT BY SENATOR STROM THURMOND

Mr. Chairman, I join you in welcoming Admiral Blair, General Schwartz, and General Pace to the second in the series of hearings with our regional and warfighting commanders. Our panel represents areas of the globe that are an ever increasing political and security challenge to the United States.

In the Pacific, we are confronted by the two sleeping giants, India and China, optimistic peace talks between North and South Korea, and ethnic strife ready to explode in various parts of the region. In South America, the strife in Colombia is forcing the drug lords and their operations into neighboring countries threatening to spread our so-called war on drugs. Although the historical focus of our Nation has been toward Europe, in my judgment, the future lies in the Pacific and south of our borders. Today's witnesses are bringing a focus on their regions and effectively securing our vital national security and economic interests. They accomplish their missions despite quality of life challenges for their personnel and underfunding of vital readiness accounts.

Mr. Chairman, I look forward to the testimony of our distinguished group of commanders and thank them for their professionalism and distinguished service to our Nation. I would also like to assure them that the committee will take into consideration their requirements as we deliberate on the defense budget for fiscal year 2002 whenever it arrives.

Thank you, Mr. Chairman.

Chairman WARNER. Senator Levin.

STATEMENT OF SENATOR CARL LEVIN

Senator LEVIN. Mr. Chairman, thank you. Let me first join you in welcoming our distinguished witnesses here this morning. They have made great contributions in the past to our Nation's security, and their advice and commentary to us is indeed welcomed.

At the outset, let me thank you, General Pace, for your assistance and your counsel and your hospitality as three colleagues of myself and the chairman of this committee and I went to Colombia not too many weeks ago. Senators Reed, Bill Nelson, Ben Nelson, and I made that visit. It was a very important one for us, and your participation contributed a great deal to that importance.

This morning's hearing takes place as the administration continues to conduct a review of existing policies toward China, including potential arms sales to Taiwan, and existing policies which are being reviewed toward North Korea, Colombia, the Andes, and a number of other hot spots in the world.

In recent weeks, President Bush has expressed support for *Plan Colombia* and for the peace process, but declined to have the United States represented at the peace negotiation table.

In recent weeks, President Bush has expressed skepticism about the course of negotiations with North Korea, thereby weakening the position of the South Korean president in his negotiations with North Korea.

In recent weeks, the President has characterized the United States and China as strategic competitors, quite a contrast to the prior characterization of his predecessor of our relationship with China as one of strategic partnership.

There is an impression here and abroad that the administration appears to be backing away from U.S. engagement in a number of critical areas around the world, from the Balkans, to the Middle East, to the Korean Peninsula. If so, I am concerned that that disengagement could cause us to lose some opportunities to ease tensions in several regions of the world and, therefore, lose opportunities to make this country more secure.

So, this is a very timely hearing. There is a huge number of issues to be reviewed with our witnesses. I look forward to their testimony this morning and the opportunity to ask them questions. Thank you, Mr. Chairman.

Chairman WARNER. Thank you very much, Senator Levin.

Unless other members of the committee have a comment, we will proceed to receive the testimony from our witnesses, and Admiral Blair, we will ask you to lead off.

The full statement of all witnesses will be admitted to the record.

STATEMENT OF ADM. DENNIS C. BLAIR, USN, COMMANDER IN CHIEF, UNITED STATES PACIFIC COMMAND

Admiral BLAIR. Chairman Warner, Senator Levin, and other distinguished members of the committee, I need to begin by thanking all of you for the support that you have given to the men and women of the Pacific Command. They know you care and it comes through to them. Thank you very much.

Our priorities in the Pacific Command are readiness, regional engagement, transformation of the Armed Forces, and resources.

I must tell you readiness is a mixed picture. We have made progress in some areas in the past year; we have lost ground in others. We can do our job today, but I remain concerned for the future unless we address some of the structural readiness issues in operations and equipment, as well as sustainment, restoration, and modernization.

I just returned, as the Chairman mentioned, from a trip to China, Korea, and Japan. With our forward-based and our forward-deployed forces, we reassure our friends, we are deterring our potential enemies, and we are making some progress on enhanced regional cooperation which will build a security structure which will posture us for the missions of the future, as well as those of the past.

Third, transformation. Working with the Joint Forces Command, we are experimenting our way into the future in the Pacific Command using our existing exercise program, including our allies. Our concept for the future is called a joint mission force.

Finally, resources. Our strategy for the Asia-Pacific region is built on a foundation of ready, balanced, forward-deployed forces with information networks that can enable them to move around the theater with confidence and a mobility system to get them there quickly. We need sustained funding and support for those forces and for the headquarters which direct them. It is important because this region is dynamic, because America has big security interests there, and our Armed Forces play a strong role in there.

As far as the question that you raised, Mr. Chairman, on China, based on my recent trip there I can make a couple of points. We probably will want to discuss it further, sir.

Chairman WARNER. Please do. In particular, review the package that has come forward from Taiwan, the procedure by which it is to be reviewed, both by yourself and the administration, and the likely timetable of the announcement, to the extent you have knowledge of that.

Admiral BLAIR. Yes, sir.

The requests for arms sales this year were delivered by the Taiwan Deputy Chief of the General Staff last fall, and it was an extensive list of equipment really across all three of their Armed Forces: Army, Air Force, and Navy.

My role in the process is to evaluate sufficient defense for Taiwan across the Taiwan Strait. We do a detailed military analysis of the balance of likely developments and trends, and then I submit that up the chain for the President to make the final decision on which arms should be made available based on my military input and other factors.

That process is in progress right now. The rough deadline that we generally set for ourselves is next month, the month of April, that we generally reply. We are doing the work now to meet that deadline.

Chairman WARNER. When you use the word "my," my understanding of that is that it is yourself, of course, as CINCPAC. But you take into consideration your senior Army commander, your senior Air Force commander. You have also a senior Navy commander and a senior Marine commander. So, it is a composite of the senior commanders of all of our forces in that region.

Admiral BLAIR. It is a composite. We benefit from several assessments that have been made over the last couple of years in which teams have visited Taiwan, have talked with the Taiwanese. We have looked carefully at the intelligence and we have come to a judgment as to what is the state, both right at the moment and the trends in terms of Taiwan's sufficient defense, and what would make that defense sufficient.

Over the long term, the most destabilizing parts of the Chinese buildup are their intermediate-range and short-range ballistic missiles, the CSS-6s and CSS-7s, of the type that were used in 1996 to fire in the waters north and south of Taiwan. I have told the Chinese directly on numerous visits, including the one last week, that the buildup of these missiles, which presently are weapons of destruction, not of military significance, but as their numbers increase and as their accuracy improves, become militarily significant, will force a response by the United States eventually in order to maintain that sufficient defense. That really is the most troubling aspect of the buildup.

I talked to the Chinese about the 18 percent increase that you mentioned when I was there. I was told at many different levels, not simply Beijing, but the field commanders that that would largely go for personnel expenses, maintenance, and then a certain amount to acquisition. But they understand, as do all armed forces, that you need to compensate people beyond your conscript force in order to be effective under modern conditions, and they are putting some money to that. So, I do not translate that directly into weapons.

They are having mixed success with the weapons that they are purchasing from the Russians. It is not just a case of having the systems themselves, but the entire logistical support, training, and integrating with the mother systems is difficult business. As I say, the People's Liberation Army is having mixed success in turning those into effective combat capability.

So, my overall assessment, which is in my written statement, is that for the near term, the balance across the Straits is stable. There are certain trends that have to be addressed in order to keep it stable. I emphasized with the people I talked with in China that military means are not the best way to achieve the one China, which is Chinese policy, American policy, that the military side of this equation should be kept in the background. The things that will draw China and Taiwan are nonmilitary ties, commercial, financial, information, travel, those sorts of activities.

The Chinese agree. They want a peaceful resolution as well, but they maintain the right to use force, and we maintain that resolution must be peaceful. That is where we are, Mr. Chairman.

Chairman WARNER. Do you wish to cover other areas of your area of responsibility (AOR)? I think it is important that you do.

Admiral BLAIR. Why do I not wait for questions, sir, if that is all right with you.

Chairman WARNER. We will do just that then.

[The prepared statement of Admiral Blair follows:]

PREPARED STATEMENT BY ADM. DENNIS C. BLAIR, USN

INTRODUCTION

Mr. Chairman and members of the committee: On behalf of the men and women of the United States Pacific Command, thank you for this opportunity to present my perspective on security in the Asia-Pacific region.

Having served as Commander in Chief, United States Pacific Command (USCINCPAC) for over 2 years, I continue to believe, as we enter into this century, that a secure, peaceful, and prosperous Asia-Pacific region is very much in the interests of America, and the world. Alternatively, an uncertain Asia may present only crises and dangers. We base our power and influence on our values, our economic vibrancy, our desire to be a partner in this critical region, and the forward-stationed and forward-deployed forces of the U.S. Pacific Command (USPACOM).

DEVELOPMENTS IN THE ASIA-PACIFIC REGION

Since I last testified before you, developments in the region have offered promise and continuing challenges.

Japan

Japan remains our most important ally in the Asia-Pacific. Although the economy is virtually stagnant, Japan remains the second largest economy in the world and continues to have a strong economic impact on the Asia-Pacific region. Japan hosts nearly 41,000 U.S. Armed Forces personnel and serves as a forward-deployed site for about 14,000 additional U.S. naval personnel. Japan also contributes \$4.86 billion in host-nation support, the most of any U.S. ally. These forward-stationed and forward-deployed forces are key for the United States to meet commitments and defend American interests throughout the Asia-Pacific region. The U.S.-Japan alliance is the cornerstone of U.S. security interests in Asia, and it is fundamental to regional security and peaceful development.

Over the past year, we made steady progress in strengthening our alliance with Japan. The two countries signed a new 5-year Special Measures Agreement (SMA) that will take effect on April 1, 2001. While the utilities cost-sharing levels are down slightly from the previous SMA, the new agreement provides for the same levels of labor cost-sharing and training relocation costs as those of the previous SMA.

Over the past year, working groups took the first steps to implement the Defense Guidelines. In addition, Japan's Diet passed the final piece of Defense Guidelines-related legislation: a law authorizing the Japanese Self-Defense Forces (JSDF) to conduct ship inspections to enforce UN sanctions. Now that a site for the replacement facility for Marine Corps Air Station Futenma has been selected in northern Okinawa, detailed discussions have begun over the type and scale of the facility. U.S. and Japan ballistic missile defense cooperation continued on Navy Theater-Wide research.

On February 9, 2001, U.S.S. *Greenville* collided with the fishing vessel *Ehime Maru*, resulting in the loss of the ship and nine lives, including students. The U.S. Government and Navy have apologized to the Government of Japan and the families of the victims, are evaluating the feasibility of raising the vessel, and will provide compensation to the victims. The Navy has convened a Court of Inquiry to examine the events contributing to the incident and accountability. The U.S. and Japan have a strong bilateral relationship whose enduring strength has benefited both sides for close to half a century. We believe we will be able to move forward from this tragedy in the interests of both nations and our peoples.

The roles and capabilities of the JSDF are slowly evolving to meet future challenges. The Japanese Ground Self-Defense Force provided a 45-man transportation unit as part of the Golan Heights UN Disengagement Observer Force. The JSDF has also worked closely with USPACOM components to restructure bilateral exercises to develop skills for humanitarian assistance, search-and-rescue, non-combatant evacuation, consequence management for chemical, biological, and nuclear incidents, and complex contingency operations that are likely to occur in the future. JSDF is sending observers to Team Challenge, a linked series of exercises addressing these missions and involving several Asia-Pacific nations. I am also encouraged by the increased attention that the JSDF is giving to cooperating with regional armed forces—the Republic of Korea in particular.

I remain deeply concerned about the Shinkampo private industrial waste incinerator abutting Naval Air Facility Atsugi. While dioxin levels have fallen significantly since Shinkampo completed the installation of bag house filters last May, construction has not started on a 100-meter smokestack that the Prime Minister of Japan

committed to building by March 2001. This situation continues to be a serious health risk to our servicemembers and their families.

We must solve individual local issues arising from our forces based in Japan. As important, however, is that the U.S. Pacific Command and the JSDF maintain the capability to defend Japan and build the capability to operate together in order to face the common regional challenges of the future—peace operations, noncombatant evacuation operations, humanitarian relief and dealing with transnational concerns. The Defense Guidelines show the way to the future for the U.S.-Japanese alliance and we must proceed in that direction.

South and North Korea

Last year, the U.S. and Republic of Korea (ROK) began the commemoration of the 50th anniversary of the Korean War. About 37,000 U.S. troops remain stationed in the ROK to deter North Korean aggression.

Political developments in Korea have been breathtaking, highlighted by the June 2000 summit between President Kim Dae-Jung and his North Korean counterpart Kim Jong-Il. Other North-South reconciliation activities included reunions between selected families separated by the war, increased aid, and agreements to increase economic links including a road and railway passing through the demilitarized zone.

At the same time, North Korea's military training cycle in the winter and summer of 2000 was the most extensive ever, and the ongoing winter training cycle remains robust. North Korea continues to maintain 60 percent of its forces within 100km of the DMZ.

Given North Korea's continuing significant military capabilities, the Republic of Korea and the United States must maintain the deterrent power of the Combined Forces Command (CFC). Any changes to the CFC posture must come through mutual and verifiable confidence-building measures that increase warning times for aggression.

I remain concerned about the lack of frequency clearances granted by the ROK government to U.S. forces for planning and training. For example, there are no frequencies cleared to support UAV training on the peninsula. Likewise, we are currently limited to only 126 VHF/FM frequencies for planning purposes, far short of the over 1,000 frequencies we would expect in an operational scenario. We will continue to work to resolve this deficiency.

Whatever the future holds, it remains in the interests of both the Republic of Korea and the United States to have a continued U.S. forward presence on the Korean Peninsula. Recent developments have been encouraging. The recent renewal of our Status of Forces Agreement (SOFA), the conclusion of the No Gun Ri investigation, and the agreement on missile guidelines reflect the mature relationship between the United States and South Korea and provide a strong foundation for future cooperation on the Korean Peninsula. The Commander in Chief of U.S. Forces Korea has also proposed a Land Partnership Plan that, once enacted by Korea, will make U.S. force presence less burdensome while enhancing training and combined warfighting capability. We also will begin negotiations for a new Special Measures Agreement that we hope would increase South Korea's financial support for the stationing of U.S. troops in the country.

The Republic of Korea increasingly contributes to meeting regional security challenges by contributing 419 troops to peacekeeping in East Timor, consulting and cooperating with the JSDF, participating in exercises such as RIMPAC (a major, multilateral naval exercise) and PACIFIC REACH (a submarine rescue exercise also involving naval forces from Japan, Singapore, and the United States), and participating as observers in Team Challenge.

China

During the past year, military developments in China have been mixed. A White Paper issued in February 2000 emphasized China's commitment to peacefully resolving its differences with Taiwan, but also specified conditions that could trigger the use of force against Taiwan. Chinese military spending increased, and Beijing continued to acquire advanced weapon systems from Russia.

The People's Liberation Army (PLA) is modernizing and making organizational changes in all branches of service to strengthen homeland defense, expand regional influence and support sovereignty claims to Taiwan and the South China Sea. China continues to increase its modern combat aircraft inventory and improve air defenses, particularly across the Taiwan Strait. The PLA navy conducted sea trials for eventually fielding additional surface ships and submarines, continued testing of anti-ship missiles, and received its second modern Russian guided missile destroyer. PLA ground forces continued downsizing to reduce force structure and increase mobility. The PLA missile force continued testing and fielding of newer inter-continen-

tal and short-range ballistic missiles (SRBM) and is building additional SRBM launch sites within range of Taiwan. China's exercise program, while extensive, was not explicitly threatening to Taiwan.

Over the past year, we have reinitiated military relations with China on a realistic foundation. We have fashioned policies that offer China areas for productive relations, while ensuring that we can deal with a more confrontational posture, should it be necessary. We emphasize areas of mutual interest and encourage Chinese participation in regional security cooperation while maintaining that diplomacy, not armed force, should settle disputes.

We have exchanged visits between senior PLA delegations and U.S. counterparts, and ships have conducted reciprocal port visits. PLA forces participated in a search-and-rescue exercise in the Special Administrative Region of Hong Kong, and four Chinese officials (two from the PLA and two from the Ministry of Foreign Affairs) attended the Asia-Pacific Center for Security Studies in Honolulu. We have invited the PLA to participate in more multinational conferences on topics involving regional security cooperation than it has chosen to attend. We carefully vet our engagement in accordance with the National Defense Authorization Act.

The Taiwan Armed Forces also continue their restructuring and force modernization. A civilian Defense Minister now oversees the Armed Forces. The Taiwan military relies heavily on the United States to modernize its forces. Through last year's arms sales, Taiwan's Armed Forces increased surveillance capabilities and modernized air-to-air, air-to-ground and air-to-surface weapons. Taiwan is looking forward in its modernization plans by improving a number of bases and infrastructure to support acquisition of future weapons.

As Taiwan modernizes its Armed Forces to ensure a sufficient defense, training, inter-service interoperability, and logistics support become even more important. The Taiwan Armed Forces will have to put resources and attention into these areas to retain the qualitative edge.

Based upon our assessments, I conclude that the changes in PLA and Taiwan military forces have not significantly altered the balance of power across the Taiwan Strait. Taiwan's military maintains a qualitative edge over the PLA, and the PLA still lacks the capability to invade and hold Taiwan. China maintains a quantitative edge in all branches of service, but does not have adequate power projection to quickly overcome Taiwan's more modern air force and inherent geographical advantages, which favor defense. Beijing's military forces, however, have the ability to inflict significant damage to Taiwan.

We expect China to accelerate military modernization, but pressing economic and social issues will temper this effort. Military modernization will not decisively alter the military situation across the Strait in the next several years. The continuing buildup of Chinese ballistic missiles, combined with increases in accuracy, will increasingly pressure the sufficiency of Taiwan's defenses. The U.S.-China-Taiwan relationship will continue to be a critical factor in our regional engagement strategy.

India

U.S. military relations with India have been restricted since India's nuclear weapons tests in 1998. Areas for military cooperation exist, however. Peacekeeping is the most promising. We have also agreed to discuss search-and-rescue, humanitarian assistance, and environmental security. The U.S. and India have also set up a working group to address counter-terrorism cooperation. The response to India's recent earthquake demonstrated the value of cooperation, both civilian and military. We are pursuing opportunities to build a foundation for closer relations. I believe a gradual strengthening of military interaction is in the interests of both countries. The more we work with India and Pakistan, the better we can defuse tensions by supporting productive relations between those two nuclear-armed countries.

Insurgents and Communal Violence

Beyond Kashmir, which remains a flash point of tension between India and Pakistan, insurgents and communal violence affect many states in the Asia-Pacific Region.

Indonesia faces violent separatist movements in Aceh and Irian Jaya (West Papua) and sectarian violence in the Maluku Islands and Kalimantan. Intense fighting on the Jaffna Peninsula between the Tamil Tigers and Sri Lankan Armed Forces continues without significant gains by either side. Nepal faces an increasingly troublesome Maoist insurgency. For much of the year, the Philippine Armed Forces have battled the Moro Islamic Liberation Front (MILF) and operated against hostage takers, including the Abu Sayyaf, which took American Jeffrey Schilling hostage. Indonesia, Sri Lanka, Nepal, and the Philippines are still searching for the

right combination of political, economic development, and military/police measures to effectively address these insurgencies and sectarian strife.

In Fiji, a coup overthrew the democratically elected government, and the Solomon Islands have experienced separatist violence that caused a change in government and the evacuation of foreign nationals. Also, fighting among various ethnic groups on Burma's borders, much of it connected to illegal drug trafficking, has spilled into Thailand.

Communal violence not only causes suffering and slows the political, social, and economic development of countries in the region; violence also fosters terrorism, causes refugees to migrate, and creates humanitarian disasters that spill across national borders.

Indonesia

Indonesia is still undergoing major political, social, and economic changes after 40 years of authoritarian rule.

The Armed Forces of Indonesia, or TNI, began reforms in 1999 that they have yet to complete. The reforms call for the TNI to become a professional, modern armed force, focused on external defense and divorced from political practices. The number of TNI seats in parliament has been reduced and the police force separated from the TNI. However, elements of the TNI have been reluctant to continue reforms. The TNI remains a major political force, particularly on the local level, and retains the major role in internal security. It has not brought under control the militias in West Timor, resulting in the deaths of three UN workers and a continuing security threat to East Timor, nor has it yet brought to justice any of those who orchestrated or engaged on atrocities in East or West Timor. TNI reform is an important aspect of restoring order in Indonesia in a manner that promotes democratic development and regional security.

Most interactions between U.S. and Indonesian Armed Forces have been suspended until there is credible progress toward accountability for East Timor human rights abuses and the return or resettlement of refugees. During the past year, limited interaction with the TNI involved a Navy humanitarian exercise and Indonesian Air Force observers at Exercise Cobra Gold. The objectives of interaction with the TNI are to favor reform and build capability for coalition operations.

Under the protection of international peacekeepers, East Timor today is generally secure from the militias, but the work has just begun to establish a fully functioning society. Our Australian allies did a great job in leading this UN-mandated peace operation and remain the backbone of the security forces. The Philippines and Thailand have stepped forward to assume leadership of the peacekeeping forces since it became a UN operation. The U.S. Armed Forces continue to conduct operations in East Timor by providing liaison officers, engineers, and humanitarian assistance during ship visits.

Philippines

The Philippines experienced a peaceful transition of power from former President Estrada to former Vice President Gloria Macapagal-Arroyo (GMA). Throughout the period of the impeachment hearings and transfer of authority, the Armed Forces of the Philippines (AFP) acted with restraint and used constitutional precepts as guiding principles.

Following the ratification of the Visiting Forces Agreement (VFA) in May 1999, the frequency and quality of interactions between U.S. and Philippine Armed Forces has also improved. The AFP has actively participated in initiatives to enhance regional cooperation and promote regional security. It deserves credit for taking a leading and responsible role in East Timor, contributing ground forces to the International Force in East Timor (INTERFET) coalition, providing the first force commander for the peacekeeping force of the UN Transition Authority for East Timor (UNTAET).

The United States maintains its Mutual Defense Treaty with the Philippines, and our defense relations have steadily improved over the past year. The Defense Experts Exchange, a consultative group established between OSD and the Philippines Department of National Defense in 1999, has made progress in identifying the Philippines' national security and force structure needs. The talks address ways to help the Philippines increase readiness and become a more active contributor to regional security. Operations with, and assistance from, the United States cannot substitute for adequately funded Armed Forces, and the Philippines has not yet made the necessary investments.

The Philippines continues to face significant internal security challenges from organizations such as the MILF, the Communist New People's Army (NPA) and the Abu Sayyaf Group. This past year, the United States initiated a \$2 million program

using Nonproliferation, Antiterrorism, Demining and Related (NADR) program funds to train and equip a counter-terrorist unit that will improve the AFP's capability to deal with hostage taking and other terrorist incidents.

Thailand

A strategic ally, strongly oriented to U.S. military training and equipment, Thailand aspires to adopt force modernization and "jointness" along U.S. models. Thailand consistently responds positively to U.S. requests for access, training, and transit. Thailand is one of the nations in Asia most committed to building regional approaches to future challenges—peacekeeping, humanitarian assistance, and transnational concerns. Exercise Cobra Gold in Thailand is developing into a multilateral training event to improve participating countries' capabilities to cooperate in peacekeeping and humanitarian missions.

Thailand has taken a leading Southeast Asian regional role in support of peacekeeping by maintaining battalion strength forces in East Timor. The current military commander in East Timor is Thai LTG Boonsrang Niumpradit. We support humanitarian demining in Thailand and will transfer that program over to Thailand by fiscal year 2002. Joint Task Force Full Accounting Detachment-1 in Bangkok logistically anchors our POW/MIA recovery efforts throughout Vietnam, Laos, and Cambodia.

Within the last year, Thailand has requested U.S. assistance to the Royal Thai Army in combating drug traffic across the Burma-Thai border. U.S. Pacific Command is in the early stages of establishing a modest program of assistance against this common threat. Joint Interagency Task Force West (JIATF-WEST) is the standing task force for all counterdrug (CD) issues in the theater and has the lead to work training, equipment, and organizational coordination initiatives to assist the Thais with their CD mission.

Australia

This year marks the 50th anniversary of the ANZUS treaty, and Australia remains America's closest ally in the Asia-Pacific region. Australian Armed Forces not only took the lead in East Timor operations, but they remain the largest part of the UN security force there. They also evacuated civilians and provided peace monitors in Bougainville and the Solomon Islands. The Australian government has been active in promoting the return of democracy in Fiji and in promoting security and peaceful development throughout the archipelagic states of Southeast Asia and the South Pacific. Australia has also constructively engaged in dialogue with China and North Korea to promote peace in Northeast Asia.

In recognition of our special relationship, we have pursued an agreement to exempt qualified Australian firms from U.S. International Traffic in Arms Regulations controlling unclassified military technology.

Australia recently completed an extensive Australia Defence 2000 White Paper that clearly lays out its future defense requirements. The White Paper achieved broad national support and general bipartisan consensus through a unique consultation process that involved the public and all government agencies. The product is a plan to acquire the skills and equipment Australia will need to succeed across the full range of defense tasks, along with required funding.

Singapore

Completion of the deep draft pier at Changi Naval Base signifies Singapore's contribution and desire for continued U.S. presence in the region. Though not an ally, Singapore is a solid security partner in the Asia-Pacific region, a vocal proponent for U.S. access, and supports and hosts multilateral activities. Singapore hosted PACIFIC REACH, a multi-lateral submarine rescue exercise; participated in Cobra Gold and in numerous anti-piracy regional conferences; and is planning a regional Mine Counter-Mine exercise in May 2001.

Singapore seeks greater interoperability with the U.S. Armed Forces. It views high technology and advanced hardware as a deterrent and is increasing its cooperation with the U.S. in joint experimentation. Singapore participates with the Extension of the Littoral Battlespace Advanced Concept Technology Demonstration (ACTD) and is active in other experiments such as the Joint Mission Force and Asia Pacific Area Network.

POW/MIA Efforts in Southeast Asia

Joint Task Force Full Accounting (JTF-FA) continues to make progress on achieving the fullest possible accounting of Americans unaccounted for as a result of the conflict in Southeast Asia. JTF-FA conducted 10 joint field activities (JFAs) in fiscal year 2000—4 in Vietnam, 5 in Laos, and 1 in Cambodia. During these JFAs, the JTF-FA field teams investigated 219 cases and excavated 44 sites. JTF-FA will con-

tinue to maintain its robust pace of operations in fiscal year 2001, with 10 JFAs scheduled—4 in Vietnam, 5 in Laos, and 1 in Cambodia. Each JFA is about 30 days in duration.

In calendar year 2000, 40 sets of remains previously recovered in JTF-FA operations were successfully identified and returned to their loved ones. As of January 31, 2001, Americans unaccounted for total 1,900. In the same period, JTF-FA recovered and repatriated 24 remains we believe to be those of unaccounted-for Americans from Southeast Asia (17 from Vietnam and 7 from Laos).

Achieving the fullest possible accounting of Americans is a U.S. Pacific Command priority, and we will continue to devote the necessary personnel and resources to obtain the answers the POW/MIA families so richly deserve.

U.S. PACIFIC COMMAND PRIORITIES

The challenges to security and peaceful development in the Asia-Pacific region require regional cooperation to address effectively. They include:

- Unresolved wars in Korea, across the Taiwan Strait, and in Kashmir that have flared, on occasion, but have been restrained for over 50 years.
- Conflicting territorial claims such as the Spratly Islands, the Kuril Islands, and the Senkaku Islands.
- Major powers—China, India, and Russia—that seek greater roles in regional security.
- Communal violence driven by separatist movements and historic grievances.
- Transnational concerns—including terrorism, illegal drug trafficking, piracy, and weapons proliferation.

Our objective is an economically prosperous and interdependent region that shares dependable expectations of peaceful change. To achieve this objective, the strategy of the U.S. Pacific Command involves:

- Deterring aggression in Korea;
- Determining the future of Taiwan by peaceful means;
- Encouraging responsible development of growing powers;
- Developing multilateral capabilities to handle complex contingencies and transnational challenges;
- Planning for transition as security challenges evolve;
- Transforming our Armed Forces to increase their warfighting edge.

The priorities for the U.S. Pacific Command in executing this strategy continue to be readiness, regional engagement, transformation, and resources.

(1) Readiness

During my comments today, I will discuss the status of many programs. I should note, however, that the programs I will discuss and the associated funding levels may change as a result of the Secretary's strategy review, which will guide future decisions on military spending. The administration will determine final 2002 and outyear funding levels only when the review is complete. I ask that you consider my comments in that light.

U.S. Pacific Command forces must be fully ready to execute any assigned mission. Readiness revolves around people. If we are to recruit and retain the quality personnel that we need, service must be professionally rewarding to the members of our Armed Forces and must meet their personal and family needs. If we do not meet their basic professional and personal needs, they have many, often more lucrative, alternatives to a life of service to their Nation.

Professionally and personally rewarding service involves confidence that financial compensation is fair, that educational opportunities are available to prepare for a world that values knowledge, and that healthcare is adequate. It also involves the provision and maintenance of suitable housing and facilities in which to live and work. It involves confidence that we fill personnel billets to match the tasking and that we are properly trained to conduct the full spectrum of operations expected of us. It involves having the resources to maintain equipment in a high state of readiness both during and between deployments, and adequate munitions to train and fight. It involves adequately protecting our forces on and off duty.

Pay, Education, and Healthcare. First, let me thank you for all the positive quality of life initiatives in the Fiscal Year 2001 National Defense Authorization Act (NDAA). The pay raise of 3.7 percent, targeted pay table reform for mid-grade non-commissioned officers, basic allowance for housing amendments, partial reimbursement for mandatory pet quarantine fees, impact aid to help civilian schools educate military dependents, and tuition assistance up to 100 percent for off-duty education are all outstanding efforts that servicemen and women appreciate. Also, thanks to

your support, the performance of DOD schools is second to none, though we need help in funding operating expenses and maintaining infrastructure.

We greatly appreciate the initiatives of the 106th Congress to enhance the TRICARE benefit and its coverage to include our retirees over the age of 65. This is the right thing to do—such quality of life enhancements favorably impact recruitment and retention and ultimately force readiness. Yet, challenges remain in establishing consistent, adequate funding of the healthcare benefit in a way that does not compromise other essential programs. We must ensure health services support functions organic to our operating forces, which are not in the Defense Health Program, receive adequate funding and attention within the Service POMs.

Real Property Maintenance. Real property maintenance (RPM) continues to reveal the combined effects of aging facilities and under funding. The current and accumulating RPM backlog for U.S. Pacific Command components will amount to \$7.1 billion over the next 5 years, assuming no fundamental changes emerge from the Secretary of Defense's ongoing strategy review. Funding intended for facilities repair and maintenance often goes to more immediate operational needs, and the backlog grows. The result is that our camps, posts, and stations across the U.S. Pacific Command are shabby and deteriorating. This shortfall in real property maintenance affects readiness, quality of life, retention, and force protection that we can no longer ignore. Our people deserve to live and work in a quality environment.

Housing. Good top-rate housing that meets family housing goals of 2010 remains one of my top quality of life concerns. Projects are underway, ranging from whole barracks renewals at Fort Richardson, Alaska, and Schofield Barracks, Hawaii, to new family housing at Pearl Harbor and Kaneohe Bay, Hawaii. Commander in Chief Pacific Fleet (CINCPACFLT), Pacific Air Forces (PACAF), and Marine Forces Pacific (MARFORPAC) expect to meet the 2010 housing goal if funding continues at current levels for their programs. U.S. Army Pacific (USARPAC) anticipates adequate housing for Hawaii by 2010 if their Residential Community Initiative is successful. However, housing in Alaska and Japan will remain inadequate until substantial MILCON funding is allocated to their revitalization programs. U.S. Forces Korea (USFK) and U.S. Forces Japan (USFJ) also face shortages, forcing servicemembers to live off base in Korea and Japan, often in inadequate housing. Lack of available real estate acquisition for new housing is the biggest obstacle in Japan and Korea. When additional real estate is procured, we will need additional MILCON housing funding to meet requirements above what host nation-funded construction can provide in Japan and Korea.

Munitions. Although we are beginning to procure additional munitions, because they have just recently entered full-rate production, or have yet to do so, a number of preferred munitions are available only in limited quantities and do not support training and operational requirements. Such already limited quantities have been drawn down as a result of expenditures in Kosovo and ongoing consumption in Operation Southern Watch and Operation Northern Watch. Alternative munitions will get the job done, but with greater combat risk and losses. Funding to further increase stock levels of preferred and precision munitions is a top priority.

Force Protection. Before the terrorist bombing of the U.S.S. *Cole*, U.S. Pacific Command's Force Protection Program had expanded over the last year to include rear-area protection program during increased hostilities and critical infrastructure protection. The U.S.S. *Cole* bombing resulted in a command-wide, top-to-bottom review of our antiterrorism policies and procedures.

Funding obtained through the Combating Terrorism Readiness Initiative Fund (CbT RIF) has helped with critical emergent requirements, but the U.S. Pacific Command still has \$110 million in unfunded requirements. Joint Staff Integrated Vulnerability Assessments (JSIVA) play a significant role in assessing our program and identifying requirements.

Following the U.S.S. *Cole* bombing, the command began a full reassessment of vulnerabilities at ports and airfields not under U.S. control. Negotiating force protection memoranda of understanding with foreign countries is an ongoing process to ensure clearly delineated responsibilities.

A major challenge is to prevent increased effort from becoming a bureaucratic drill rather than a routine way of operating. Instructions and checklists help, but they are not enough. Our commanders must think tactically about force protection. On every deployment, every exercise and even at home stations, we must ingrain force protection in the very fabric of our forces. Having said that, terrorists can choose their time and place of attack. That gives them an advantage. As long as we are engaged around the world, there will be further attacks. Our goal is to minimize the impact to our forces.

Staffing, Training, and Operations. As we exploit information technology and revise our organizations, the character of combatant command headquarters is chang-

ing. Increasingly, headquarters staffs perform operational functions that forward forces used to do. As examples, my staff in Hawaii provided many logistics, communications, and intelligence support functions for our operations in East Timor that allowed us to keep the number of U.S. personnel in country to a minimum. This further reduced requirements for force protection and living support. Also, PACAF is establishing a Joint Air Operations Center at Hickam Air Force Base. This center will similarly perform many functions of the Joint Forces Air Component Coordinator, reducing the number of personnel that must forward deploy to conduct operations.

As our headquarters staffs become more involved in supporting operations 24 hours a day, 7 days a week, in addition to their administrative functions, we are finding our staffs working harder than before, even as they downsize. We have turned to the Reserve Components for help, and they have done a splendid job. But our shortfalls are growing, and we are just beginning to exploit the capability that information technology gives us to allow forward forces to reach back to staffs.

Increasingly, the measure of staffs to deployed forces is shifting from "tooth to tail" toward "brain to brawn." While the fiscal year 2001 NDAA provides some relief from the fiscal year 1998 and fiscal year 2000 NDAs, there is still a requirement for OSD designated activities to reduce personnel by 7.5 percent. These additional headquarters cuts will hinder our ability to provide effective management and oversight of command readiness and operations. It will be difficult to execute these reductions in a way that does not impact our operational readiness. In the U.S. Pacific Command our staffs are fully engaged in operations forward.

We are experiencing shortfalls not only in available billets, but also in the funds needed to train, exercise, and operate our forces. Particular areas affecting readiness are funding for flight hours, ship depot maintenance, joint exercises, and Reserve support.

The funds allocated to component flying hour programs (FHP) are increasing, but not fast enough to cover escalating costs. The rising costs of fuel and spare parts for aging aircraft appear to be driving the escalation. These costs may increase even faster in the years ahead as DOD aircraft and avionics fall further behind commercial standards. The Navy FHP is growing 15 percent annually. PACFLT is facing a \$317 million shortfall in fiscal year 2001. This figure includes a MARFORPAC shortfall of \$94 million. Both PACFLT and MARFORPAC would exhaust their fiscal year 2001 FHP funding by August without reprogramming funds. USARPAC's and PACAF's programs also have shortfalls. The Services increasingly rely upon supplemental appropriations to avert the consequences of unprogrammed escalation in operation and maintenance program costs.

PACFLT's ship depot maintenance program continues to be underfunded relative to the full requirement. Growing deferred maintenance backlogs have been kept in check largely through execution year supplemental funding from Congress. This affects battle group inter-deployment training readiness, which continues to decline as training resources are continually sacrificed to maintain deployed readiness. Forces enter training cycles at low state of readiness, fall to lower levels and then "recover" rapidly right before deployment. The resultant "spikes" in our readiness curves could become vulnerabilities if asked to respond to unforeseen contingencies.

The ability of U.S. joint forces to fight in a seamless battle space and to conduct combined operations with our coalition partners will provide the greatest gains in U.S. warfighting capability over the coming decade. Joint training represents 5 percent of the operations tempo (OPTEMPO) of forces assigned to U.S. Pacific Command. Currently, we are well within the congressionally-mandated joint exercise man-days reduction directives. Our USPACOM-wide man-day reduction through fiscal year 2000 was 32 percent, 7 percent below the objective of 25 percent. Simultaneously, we have shaped a solid Joint Training Program. This program provides us confidence that our Joint Task Forces (JTFs) are ready to fight. Further fiscal reductions to the Joint Exercise Program put our JTF and joint warfighting readiness at risk. We need full funding of the currently planned minimum exercise program. This includes Service Incremental Funding and the Strategic Lift (STRATLIFT) provided through the Chairman's Exercise Program. Inflation of flying hour costs has increased exponentially over recent years, significantly eroding our STRATLIFT buying power. This impacts us greatly in USPACOM where STRATLIFT is our lifeblood due to our vast area of responsibility (AOR). We need full funding to ensure we get the right forces, to the right place, to exercise with the right joint and coalition partners, so we can indeed remain ready.

Shortfalls also exist in funding designed to employ Reserve and National Guard personnel. U.S. Pacific Command's Reserve billets are based upon a single major theater war. Reservists' 2 week training period is sufficient for them to support one major exercise per year, which leaves the command short of personnel to support

several other major exercises in the joint training plan. Defense plans include provisions for Reserve personnel to volunteer to support exercises, but funds are inadequate to accommodate the volunteers.

Summary. Overall, the majority of readiness concerns of a year ago remain today. While making progress in some areas, we are declining in others. I continue to have no reservations about the U.S. Pacific Command's ability to do its job today. However, I do have doubts about its ability to do so in the future unless we make more progress in addressing structural readiness issues.

(2) *Regional Engagement*

While readiness prepares us to respond, through regional engagement we shape the region to promote security and peaceful development. Current circumstances provide the opportunity and the necessity to develop more mature security arrangements among the nations of the region. Opportunities derive from dynamic regional security developments and a new generation of leaders willing to reexamine what policies are genuinely in their national interest. Necessity derives from strong nationalism, ethnic and religious rivalry, and historic grievances that drive desires to settle old scores prevalent throughout the region. Steady and focused efforts ensure the region develops in ways favorable to American interests.

Engagement is a process to achieve national objectives, not an end in itself. Our efforts improve the ability of regional partners to defend themselves, deter potential aggressors, strengthens security alliances and partnerships, increases regional readiness for combined operations, promotes access for American forces to facilities in the region, and promotes security arrangements better suited to the challenges of the 21st century.

Enhanced Regional Cooperation. Over the past year, the U.S. Pacific Command has worked closely with the Joint Staff, Office of the Secretary of Defense, and the interagency community to develop enhanced regional cooperation. The objectives of enhancing regional cooperation have been to improve regional readiness for combined operations and to expand the set of states in the region that share dependable expectations of peaceful change.

Transnational concerns affect all states in the region in varying degrees. Many of the states in the region contribute armed forces and police to UN peacekeeping operations. Terrorism, weapons proliferation, illegal drug trafficking, illegal migration, piracy, and other transnational criminal activities represent problems that require regional cooperation. Some of this is police work and some of it is military work. Different countries organize differently. Since adversaries operate freely without regard for borders, seeking support, bases of operation, and weak points to attack throughout our region, the only way to win against them is international cooperation.

By developing capabilities to work effectively as coalitions in complex contingencies (such as East Timor); as partners in countering terrorism, illegal drug trafficking, and piracy; in managing the consequences of chemical, biological, or nuclear attacks, natural disasters and accidents; in evacuating citizens caught in the path of violence; in search-and-rescue of mariners in distress; and in providing humanitarian assistance, the armed forces of the region improve their readiness to contribute to combined operations. Working side-by-side on these missions builds confidence and trust among the participants as it improves operational capabilities. It provides a way for states that want to exert more influence in the region to do so in constructive ways that contribute to regional security. It provides the United States with competent coalition partners so that our Armed Forces need not shoulder the entire load.

The U.S. Pacific Command's efforts to enhance regional security include expanding dialogue among the armed forces of the region, developing standard procedures and training staffs to use them, and exercising to hone our capabilities and learn where to improve.

In addition to my visits around the region and those of my component commanders, U.S. Pacific Command sponsors a wide range of activities to promote regional security dialogue. The Asia-Pacific Center for Security Studies (APCSS—see Appendix A) brings together military officers from around the region at the colonel/brigadier level and government officials of equivalent grades for a 12-week course. APCSS also conducts a 1-week course for more senior officers and officials, and hosts about five conferences each year. The U.S. Pacific Command also hosts annual conferences on military operational law and logistics, and for the past 3 years has held a conference for Chiefs of Defense from around the region. These conferences have been very effective in promoting military cooperation against common threats.

At the Chiefs' conference, we also demonstrated our new Asia-Pacific Area Network (APAN). APAN is a non-secure web portal, which provides an internet-based

communications and collaboration ability for the armed forces of the region and civilian organizations that participate in complex contingencies to share sensitive, but unclassified, information. On it, we have begun web-based collaboration by posting standard procedures for combined operations. These web pages have mechanisms so that anyone can suggest improvements. Like many things on the web, no government signs up to use these procedures, but they are available for those who need them. Web-based planning and distributed simulations are also possible to add new, affordable means to build regional capacity. Additionally, the APAN concept provides a simple and economical means to provide a networking of institutions and training centers with this new form of collaboration and information exchange. These networks will be the building blocks for Asia-Pacific Security Communities that were previously unaffordable.

We also have held Multinational Planning Augmentation Team (MPAT) conferences to refine procedures, and conducted workshops to train staff officers from around the region as a cadre of Asia-Pacific military planners ready to reinforce a multinational force headquarters. We rely on lessons learned in East Timor and other peacekeeping operations to improve the region's capability to conduct combined operations. In November, the Philippines hosted an MPAT Staff Planning workshop attended by 18 nations, non-governmental organizations, and UN representatives. Many armed forces in the region want to improve their abilities to work together, and use APAN to continue their MPAT dialogue between workshops.

Team Challenge links bilateral exercises Cobra Gold with Thailand, Balikitan with the Philippines, and Tandem Thrust with Australia to address bilateral training objectives and to improve the readiness of regional armed forces to contribute to multilateral operations. This year Singapore will participate and other nations, such as Japan and Korea, will observe with an eye toward participating in future years. In Team Challenge we will exercise elements from the full spectrum of missions that our combined forces may be called upon to do together, from complex contingencies to humanitarian assistance.

These are examples of efforts to enhance regional security cooperation. As we progress, we find many requirements to coordinate better on logistics, intelligence and other aspects of our operations, and take steps such as developing a coalition-wide area network (successfully employed in RIMPAC, our multinational naval exercise). With cooperation from the nations of the region, and the initiative that my staff and my components have demonstrated, enhanced regional cooperation and security communities have grown from a concept to a substantial approach for promoting security and peaceful development over the past year.

The reactions to the U.S. Pacific Command's efforts have been largely positive, with some reservations. Some allies have expressed concern that multinational efforts will dilute the quality of our bilateral relations. For enhanced regional cooperation to succeed, we must strengthen our traditional bilateral relations, focusing our efforts on capabilities to pursue common interests, and then reach out to other nations in the region. The Team Challenge planning efforts have demonstrated our commitment to meeting bilateral training objectives and enhancing them with skills required for coalition operations.

Other nations have expressed concerns that this is a precursor to the United States reducing its involvement in the region. Quite the contrary! By improving our capabilities to work together, the nations of this critical region can more effectively address the broad range of security challenges that none can solve alone.

Also, some nations fear that it is a scheme for containing China. Instead, it is a way to encourage China to contribute to regional security in constructive ways. We welcome the fact that China has sent 15 police officers as part of the CIVPOL contingent to East Timor. We would welcome greater Chinese involvement in peacekeeping such as they provided in Cambodia in 1994. The last class at APCSS included two Peoples Liberation Army (PLA) officers and two officials from the Ministry of Foreign Affairs. They learned that many nations in the region share American security concerns and that cooperation in many areas is in China's interest. The way ahead in U.S. Pacific Command's relations with the PLA is, with the support of other armed forces, to encourage cooperation in areas where our Nations genuinely share mutual interests, while maintaining that disputes must be resolved peacefully. As with many nations in the region, we must work to transform PLA leadership mindsets from measuring differences in military power to measuring progress in regional security.

The \$10 million in Asia-Pacific Regional Initiative (APRI) funds provided by Congress in fiscal year 2000 and \$24.6 million provided in fiscal year 2001 have been essential to the initiatives to enhance regional cooperation. The dollars we invest in these regional activities pay huge dividends in U.S. security.

Currently, U.S. Pacific Command interactions with armed forces of 14 of the 43 nations in the region are restricted in some form. Some of these restrictions are in the U.S. interest. Others, I question. I encourage the close review of restrictions to ensure we have drawn the lines at the right places. The objective is to build relationships and influence for the long term as we exact penalties in the short term.

Foreign Military Officer Education (FMOE). One area where I would recommend eliminating restrictions is in foreign military officer education. The experience of American officers who have attended foreign military colleges provides an unparalleled understanding of how foreign armed forces see their role and approach operations. Similarly, foreign officers who attend American military colleges develop an understanding of the value of professional armed forces, removed from politics and subordinate to civilian government authority. They come to appreciate that reliance on force to resolve internal disputes, rather than political accommodation and economic development, stokes the fires of rebellion and drives away investments needed for national growth. They also acquire a deeper appreciation of America's interest in maintaining international security so all may prosper. The contacts they develop with Americans and officers from their region establish a network for dialogue and become particularly valuable as they assume leadership roles within their armed forces.

International Military Education and Training (IMET). We should also examine restrictions on many aspects of our IMET program. Education is a long-term investment and the IMET program, a main source of funding for FMOE, is our primary tool in this effort. I believe unrestricted IMET programs are fundamentally in the national interest. Some say military education is a reward for countries that behave according to international standards. On the contrary, military education is a valuable tool we use to gain influence with foreign militaries. Military training—teaching tactical skills and equipment maintenance—should be carefully tailored and controlled. However, military education—study at command and staff colleges—introduces the ideals of democracy, civilian control of the military, and respect for human rights, and should be available to all. Many reform-minded, pro-U.S. military leaders in the Asia-Pacific region today are IMET graduates who strongly advocate a continued U.S. presence and engagement in Asia.

IMET is a modest, long-term investment to help build a secure, peacefully developing Asia-Pacific region. Following a declining trend, with your help U.S. Pacific Command's funding for IMET is now on the right path. In fiscal year 2000 we received \$6.659 million for 17 countries, and in fiscal year 2001 our budget is about \$7.2 million for 19 countries. Further increases would yield real benefits to U.S. security.

UN Convention on the Law of the Sea. U.S. ratification of the UN Convention on the Law of the Sea (UNCLOS) is another action that would enhance regional security cooperation. Many Asia-Pacific countries assert excessive maritime claims that challenge navigation rights. Over the past few years, parties disputing territory in the South China Sea have shifted their approach from occupying reefs to negotiating over a Code of Conduct. In this and other disputes, the U.S. position is that agreements should be in accordance with UNCLOS. Ratification will strengthen our hand in demanding compliance with UNCLOS requirements and in countering excessive maritime claims.

Summary. We have continued to make significant progress this year in better structuring our engagement programs in the Asia-Pacific region to advance U.S. interests. Through continued emphasis on education, dialogue, standard procedures, staff training, improved communications, exercises and coordination on matters of common interest, we will continue to expand the set of nations in the Asia-Pacific region that share dependable expectations of peaceful change. We will enhance regional cooperation and access of U.S. forces to facilities in the region, strengthen alliances and security partnerships, and deter aggression.

(3) Transformation

Transformation involves changes in operational concepts and organizational schemes that take advantage of technology to provide decisive advantages in warfare. The Armed Forces of the United States are committed to leading that change in the 21st century. At U.S. Pacific Command, our transformation strategy is based on two parallel initiatives—technology insertion efforts such as the Advanced Concept Technology Demonstration (ACTD) program run out of OSD and the Joint Experimentation program that is led by U.S. Joint Forces Command.

Since I last spoke with you, U.S. Pacific Command has been rewarded for its aggressive pursuit of ACTDs with 3 fiscal year 2001 new start ACTDs and a fourth ACTD-like project, bringing the total number of ACTDs we are involved in today to 13.

The Tactical Missile Systems-Penetrator ACTD will provide a penetrator weapon designed to deal with specific high threat targets in Korea within 3 years. The Coalition Theater Logistics ACTD will provide vital logistics command and control capabilities for coalition forces operating in campaigns similar to that in East Timor. The Hunter Standoff Killer Team ACTD will provide vital joint C⁴I capabilities to engage time critical targets and massed armor. The Coalition Rear Area Security Operations Command and Control (CRASOC²) is an ACTD-like project in that it will have streamlined management and early operator involvement. CRASOC² will develop force protection C⁴I capabilities to improve coordination between U.S. security forces and host nation police and military agencies for improved protection of our forces stationed overseas.

The Advanced Concept Technology Demonstration program is serving U.S. Pacific Command well. We need such programs designed to get advanced technology rapidly into the field for evaluation and experimentation.

The pace of joint experimentation in the U.S. Pacific Command has increased since I last testified before you. Over the past year, U.S. Pacific Command has supported U.S. Joint Forces Command in the Unified Vision and Millennium Challenge series of experiments and planning conferences. We participated in Joint Warrior Interoperability Demonstration (JWID) 2000 as a primary demonstration site and the Combined Task Force Commander's headquarters in the Pacific Scenario. We have agreed to team, as host CINCPAC, with the Joint Staff and U.S. Marine Corps in the execution of JWID 2002-2003 and have already stepped forward to influence the C⁴ISR interoperability challenges that will be addressed. We continue efforts to develop joint interoperability at the tactical level through the Expanding the Littoral Battlespace (ELB) ACTD. With the support of U.S. Joint Forces Command and the Services, we have made significant progress in developing the Joint Mission Force (JMF) concept into a capability.

A Joint Mission Force is a seamless Joint/Combined Pacific Theater response force capable of accomplishing the full spectrum of missions from a complex contingency through humanitarian assistance and of serving as the leading edge of a major war. This force will execute operations more effectively, rapidly, and efficiently than we can today. This transformation effort has moved from its infancy into wargames and exercises that enhance our ability to rapidly form and deploy a Joint Task Force. We have identified the top 10 challenges to more effective Joint Task Force operations and have made significant progress in developing procedures to address them. We also have incorporated JMF and other mature experimentation into our exercise program.

We have concentrated our efforts over the past year on the improvements we need to establish a relevant, common operational picture and communicate tasking and information among the headquarters of components of a Joint Task Force. Our JMF Command and Control exercise program, or C²X, is identifying clear requirements to enable a JTF and assess where specific deficiencies exist, with the intent of fixing deficiencies by 2003. We are receiving strong support from the Services in rectifying these deficiencies that are basic to our joint warfighting capability. The greatest gains in warfighting capability that we will see over the coming decade will come from our ability to eliminate seams in the battlespace and let all units assigned to a Joint Task Force exploit their full potential. We have received significant financial and staff support from U.S. Joint Forces Command in taking the JMF concept from its infancy to a near-term capability. By including our allies and close security partners in our wargames, we ensure that our JMF efforts are in harmony with our other efforts to improve regional readiness for combined operations.

Australia, Japan, Korea, and Singapore all have the technological resources to work with the United States in developing advanced warfare capabilities. We share information on our efforts with these countries, and work together to improve coalition interoperability at the high end of military technology.

Some have expressed concerns that by strengthening coalition capabilities and working with potential adversaries on skills required for peacekeeping operations and complex contingencies, we are jeopardizing our warfighting edge. The reverse is true. We are continuing to widen the gap in warfighting capabilities between the United States, its allies and partners, and potential adversaries. As we experiment, we improve our readiness, enhance regional cooperation, and transform our forces to meet the challenges of the 21st century.

Indeed, U.S. Pacific Command's priorities of readiness, regional engagement, and transformation are not wholly distinct activities. Let me try to bring this idea alive by describing a visionary Western Pacific deployment of a carrier battle group (CVBG) on its way to the Arabian Gulf.

During workups, the battle group acts as the Navy component of a joint task force under a realistic exercise scenario. The battle group maintains a common operating

picture with a JTF commander's headquarters and subordinate Service components. During that time, it experiments with a new C⁴ system being developed by the Army—for example a new version of the Coalition Wide Area Network—holding common operational picture checks with brigade headquarters in Australia, Singapore, and the Philippines.

- As the battle group approaches Japan, it forms a two-carrier task force, and conducts an area access exercise involving Japanese and ROK forces in both coalition and opposition force roles. The battle group joins the Japanese Global Command and Control System (GCCS).

- It then integrates into the Korean area air defense and conducts experiments integrating joint and combined fires, including live ordnance fire on ranges.

- The task force then transits from Korea down to the South China Sea.
- It exercises operational deception, employing information from national technical means to evaluate effectiveness.

- It conducts Antisubmarine Warfare (ASW) exercises, working the seams between CVBG and area ASW in littoral regions, developing new concepts and establishing C⁴SIR requirements.

- It exercises area air and missile defense with an Air Force component out of Okinawa and Guam, working Air Tasking Order improvements and experiments with information operations, and routinely operating with Global Hawk to hone new joint concepts.

- The transit culminates with a dissimilar air engagement exercise with Singapore and port calls in South East Asia. During the port calls, battle group officers hold seminars with counterparts in host countries to improve coalition interoperability at the tactical level.

All of this could be done in 10–14 days. What would we have accomplished?

- Increased readiness of all forces involved, to respond to contingencies;

- Conducted regional engagement that both reassured allies, and deterred those who would use aggression to impose their will;

- Made progress in transforming the way we operate, both to take advantage of emerging technology and to address emerging challenges.

This vignette illustrates that *readiness, regional engagement, and the transformation of our Armed Forces* are not *distinct* efforts, accomplished by separate organizations at separate times. We do them together, with operational units. If we experiment and adapt, we are increasing our readiness, while we make the evolutionary changes in technology and concepts which will lead to the transformation of warfighting. If we do them with our allies and security partners, we have the most effective kind of military engagement.

Transforming our Armed Forces to maintain their leading edge and interoperability with coalition partners is essential to protecting American security interests in the 21st century. Several members of Congress have been active in pushing us to pursue this program, and we need your continued support and leadership.

(4) Resources

The U.S. Pacific Command's ability to execute its strategy rests on its ability to command ready, forward-deployed and forward-stationed forces, to move them where they need to be in the theater, and to reinforce them in the event of a major war. Ultimately this depends on the resources Congress and the American taxpayers provide us. In this section, I will discuss resources in several key areas that are important to the Pacific Command's strategy.

Command, Control, Communications, and Computer Systems (C⁴) Capabilities

Information technology is changing every aspect of warfare in an evolutionary way and warfare as a whole in a revolutionary way. From my perspective, C⁴ support fits into three main categories: (1) an end-to-end infrastructure; (2) the capability to integrate and process data into usable information and make it available when needed; and (3) the protection of information.

First, the end-to-end enterprise enhances the ability to command and control forces and consists of a space segment, a downlink capability, and the ground segment.

The U.S. Pacific Command's vast area of operations, covering 52 percent of the earth's surface, requires forces to rely heavily on strategic satellite communications (SATCOM). Since my testimony to you last year, we've made great strides in many of the SATCOM programs. For example, we accelerated the Advanced Extremely High Frequency program to compensate for a Milstar launch failure; agreed to launch a third Wideband Gapfiller System satellite to complete global coverage as

the Defense Satellite Communications System constellation replacement; and scheduled the launches of the three Milstar satellites. The challenge is to keep these critical satellite programs on track.

As I also stated last year, my Joint Task Force commanders and deployed units must have access to the strategic defense information infrastructure, the Global Information Grid, or GIG. This capability is critical to providing them with vital command, control, and intelligence information. I strongly supported the DOD Teleport program, as did many of my fellow CINCs, and I am now satisfied that this program is on course.

Advances in the space segment and downlink capability provide little value if we cannot push the information out to the user. The base, post, camp, and station infrastructures must keep pace. Since we still have antiquated cable plants, network wiring, and end-user equipment, we must attack this ground infrastructure as aggressively as we have the space segment. The recent decision that injected significant funding into the U.S. Army's European and Pacific theaters is a tremendous boost in our fight to keep pace with technology, and I applaud your and OSD's efforts in directing that funding to us. However, requirements go beyond the U.S. Army. The U.S. Air Force, Navy, and Marine Corps are also encountering the same problems and require much-needed funding support if we are to modernize entire theaters. While single-Service efforts significantly help in the modernization battle, we realize maximum payoffs when we collectively raise all Services to the same capability level.

Not to be overlooked in the end-to-end infrastructure is the frequency spectrum. We must proceed cautiously with the sell-off of DOD frequencies since that loss directly translates into potential operational risks. Once we sell them, they are forever unavailable for military use.

The second C⁴ category involves converting data into useful information that will optimize synchronous planning and execution, and improve decision support. At the heart of this requirement is interoperability and accessibility. Interoperability allows all parties to share the same capabilities and information, while accessibility allows them to get the information they require when and where they need it.

The Global Command and Control System (GCCS) is the backbone of the joint and combined command and control capability. Yet, Service variants of GCCS are not fully interoperable with the joint version. For example, the GCCS Integrated Imagery and Intelligence application being developed for the joint version of GCCS is falling behind, while the Services continue to modernize their individual intelligence applications. To fix this, we must mandate new C⁴ systems be joint 'from cradle to grave.'

There are also GCCS incompatibilities in combined operations; for example, GCCS-Joint and GCCS-Korea. These two systems share some common operational picture data, but do not share information via files, e-mail, and other web service tools. Obstacles to combined interoperability lie in information release restrictions. Our allies understandably restrict release of their classified information. Likewise, we want to control release of U.S. classified information. To achieve effective combined interoperability, we must develop much more capable security procedures and sophisticated tools to allow information exchange while protecting our national and allied data.

Technology is changing the way the warfighter prepares, trains, and executes the mission. We must develop a mindset promoting innovation and technology insertion. It is through continued support of Advanced Concept Technology Demonstrations, experimentation programs, and exercises with our coalition partners, that we find ways to improve interoperability and enhance capabilities. We must put more emphasis on acquisition by adaptation, put proven prototypes into a joint field environment, and mature them through a tight spiral development cycle. Information is power, and a fully interoperable atmosphere allows us to collaborate with coalition partners, share operational pictures, increase the speed of command, and ultimately, win the day.

Obviously, sharing information among Services, sub-unified commands, and coalition partners is a complex security challenge. That leads me to the third category, information assurance (IA). How do we provide access to, and share information with, Asia-Pacific countries while protecting U.S. and coalition-sensitive data from potential adversaries?

To improve IA in the U.S. Pacific Command, we are taking several measures. We are evaluating the Automated Intrusion Detection Environment. Our Theater C⁴ISR Coordination Center is building a theater IA common operational picture (COP) (similar to the COP we use in the command and control arena) and tracking intrusion attempts and methods. We also are working closely with the Defense Informa-

tion Systems Agency on an improved configuration that will provide full coverage of external connections to our Pacific networks.

Yes, we can improve IA in the theater; however, to do so requires a heavy investment in people and additional hardware. The payback is not always as easily recognizable as with the production of new airplanes, ships, or tanks. You cannot touch and feel information protection, but a loss of critical or time-sensitive information or a denial of service can be far more detrimental to national security than a single weapon system. I request your continued support as we implement IA into our daily operations.

As you can see, C⁴ is a major concern in the Pacific and my top resource priority. While we have made great strides recently in addressing satellite communications shortfalls, we still have a long way to go. We must now focus on modernizing the ground infrastructures and ensuring the protection of our networks and the information that traverses them.

Intelligence

Intelligence is essential to monitor potential adversary developments and preparations so that we can train our forces for the threats that they face and move them into position in a timely fashion. Shortages of airborne intelligence, surveillance, and reconnaissance (ISR) assets—U-2s, RC-135s, EP-3s, significantly impact USPACOM's readiness ratings. These shortfalls diminish our situational awareness, early indications and warning (I&W), and deep knowledge of the capabilities, plans, and intentions of key theaters in our area of responsibility. Although Joint Staff-planned allocation of airborne reconnaissance assets is adequate for routine operations in the Pacific Theater, we do not have the surge capability to monitor crises or cyclical increases of potential adversary activities. Other chronic shortfalls in high priority intelligence include linguists, tactical signals intelligence (SIGINT) systems, intelligence specialists, and intelligence interoperability.

The core of intelligence analysis and dissemination in the theater is the Joint Intelligence Center Pacific (JICPAC), located near Pearl Harbor. JICPAC's operational efficiency and impact suffers because almost 100 JICPAC personnel must work in a revamped hangar at Hickam AFB, due to space limitations in the main JICPAC facility. These split-based operations cost almost \$300,000 per year for the separate facility, as well as lost time and efficiency. In addition, JICPAC's building, in a vulnerable location near a major highway, presents a serious force protection issue. At the same time, the Kunia Regional SIGINT Operations Center (RSOC) occupies an aging facility, built in 1945, renovated for cryptologic operations in 1979, and then updated throughout the last 20 years. Collocating the RSOC with the new JICPAC facility on an intelligence "campus" would improve intelligence exchange, analytical dialogue, and efficiencies in infrastructure.

Advances in global telecommunications technology continue to place enormous pressure on the need to modernize both national and tactical cryptologic capabilities. USPACOM supports the National Security Agency/Central Security Service's (NSA/CSS's) strategic transformation actions and changes undertaken in the last year. NSA must transform to address the global net, but warfighters' knowledge of adversary battlefield communications will also continue to be a high USPACOM priority. NSA must be funded to continue modernizing tactical SIGINT collection capabilities, operations of the RSOC and accompanying land-based collection architecture, addressing ELINT collection shortfalls, and operations of the Information Operations Technology Center (IOTC).

Specifically, NSA needs more capable, joint tactical cryptologic systems. Rapid advances in widely available communication technology have rendered obsolete much of the current inventory of tactical cryptologic systems. At the same time, the Services' R&D funding has declined. NSA and the Services must continue to aggressively pursue standards and common architectures, such as the Joint Tactical SIGINT Architecture.

Increased HUMINT capabilities are critical to support collection against strategic and operational requirements in the Pacific. Improvements are needed to enhance collection against key USPACOM indications and warning requirements and hard-target organizations and countries. Continuing investment in theater-based HUMINT resources, specifically computers and communications capabilities, is essential to improve collection against hard targets. Any further Defense HUMINT Service (DHS) reductions will adversely impact USPACOM-based U.S. Defense Attaché Offices (USDAOs), field operating bases, and DHS support to key USPACOM collection requirements and contingency operations. The USDAO system, in particular, already is experiencing serious resource constraints in the USPACOM AOR.

The Nation's future imagery and geo-spatial architecture will deliver unmatched capability, including enhanced imagery collection provided by unmanned aerial vehicles and the future imagery architecture. However, USPACOM warfighters will not reap the full benefits of this capability without full tasking, processing, exploitation, and dissemination (TPED) investment. A robust TPED architecture is essential to ensure that dynamically tasked national, airborne, and commercial imagery and geo-spatial products connect the sensors to the analysts and, ultimately, to the tactical consumers. Services and agencies must institutionalize the need to properly program resources that incorporate TPED capabilities. Progress is occurring and CINC interests are being addressed. However, we will work to identify outyear funds to meet substantial portions of Senior Warfighting Forum priority requirements. Specifically, the Services must work with National Imagery and Mapping Agency to fund the capabilities needed to make Joint Vision 2010/2020 a reality. These include required technical enhancements to theater digital infrastructure, advanced analytical exploitation tools, and improved imagery analyst training (especially for advanced sensor products).

Asian linguist deficiencies are acute and a documented USPACOM readiness concern. Despite additional student slots at the Defense Language Institute, there are recurring and persistent shortages of Asian linguists to meet Operation Plan (OPLAN) and Contingency Plan (CONPLAN) requirements. Also, resources for low-density linguists in support of probable Noncombatant Evacuation Operations (NEO) continue to be problematic. Service recruiting and retention shortfalls, coupled with the inherent difficulty of Asian languages and the longer training periods required, aggravate these deficiencies.

Mobility Infrastructure and Strategic Lift

With congressional and Service support, we have made solid progress in correcting deficiencies in our mobility infrastructure. A total of 15 MILCON projects are either in work or programmed through fiscal year 2004. We will apply supplemental MILCON funding for fiscal year 2001 to critical en route and currently unfunded infrastructure projects, such as those at Wake Island.

We support the fiscal year 2001 MILCON language that would restore MILCON contingency funding. While we are making headway with some near-term MILCON projects, sustained funding is still required. The continued appropriation of resources is absolutely essential to maintain an upward trend and complete the necessary repairs of our aging mobility infrastructure.

In addition to a well-maintained mobility infrastructure, contingency throughput in our theater largely depends on strategic lift. As identified in the recently released Mobility Requirements Study 2005 (MRS-05), there are "areas where improvements are needed in mobility programs. . . . An airlift fleet of 49.7 million-ton-miles per day, (the previous established level), is not adequate to meet the full range of requirements." I fully support the MRS-05 recommendation that "DOD should develop a program to provide [additional] airlift capacity."

Army Prepositioned Stocks (APS-4)

A key logistics and sustainment shortfall remains in Army Prepositioned Stocks (APS-4) in Korea. Sustainment shortfalls limit ability to reconstitute the force and sustain missions, resulting in increased risk. Major end item shortages include M1A1/A2 tanks, MLRS, HEMTT fuelers, and some chemical defense equipment. Equipment shortages currently total about \$450 million. Lack of repair parts and major assemblies within the APS-4 sustainment stockpile will directly impact the ability to return battle-damaged equipment to the fight. The Army's current plans are to cascade additional equipment into the APS-4 sustainment stocks over the next couple of years, thus reducing this shortfall.

Infrastructure in Japan and Korea

The Host Nation-Funded Construction (HNFC) programs in Japan and Korea provide almost \$1 billion annually in new construction to support U.S. Forces. However, the United States must fund the initial project planning and design (P&D) effort. For fiscal year 2001, the U.S. Army Corps of Engineers allocated \$20.5 million for the HNFC program. This is a return on investment of 46:1. Continued congressional support for the planning and design funding is critical.

One provision of the latest Special Measures Agreement is that Japanese Facilities Improvement Program (JFIP) funds can no longer be used for "revenue producing" projects. Examples of projects disallowed in the fiscal year 2001 program were Army and Air Force Exchange Service warehouses, exchanges, commissaries, and gymnasiums. The effect of this provision is that additional MILCON funding will be required for the Services, Defense Logistics Agency, Army and Air Force Exchange Service, Navy Exchange, Defense Commissary Agency, and DOD schools to

support quality of life initiatives for our servicemembers in Japan. We will need strong congressional support for these MILCON projects when programmed. There has not been a MILCON project completed in Japan since 1989.

New Headquarters Building

I would like to offer my thanks again for your support for the new U.S. Pacific Command Headquarters building. We held the groundbreaking ceremony in February and are on track to provide a facility designed to support the 21st century.

Security Assistance

Security assistance funding in the Pacific theater is an important component of my theater engagement strategy.

Foreign Military Financing (FMF). For fiscal year 2001, two U.S. Pacific Command countries will each receive about \$2 million in FMF: Mongolia, to increase its border security capabilities; and the Philippines, for critical aircraft and patrol boat spare parts. State Department has allocated FMF for East Timor, as those funds meet legislative requirements.

Enhanced International Peacekeeping Capabilities (EIPC). The Asia-Pacific region needs better capabilities to respond collectively when the United Nations or the nations of the region determine that an international response is required. Approximately \$2.2 million in fiscal year 2001 EIPC funds have been requested for five Pacific Command countries, to either enhance existing or establish new peacekeeping operation (PKO) training centers. These well-spent dollars are helping our neighbors share the PKO burden around the world.

Nonproliferation, Antiterrorism, Demining, and Related Program (NADR), and Overseas Humanitarian Disaster and Civic Aid (OHDACA). NADR funding has helped the Philippines improve its ability to deal with terrorists, and, in combination with DOD OHDACA money, has done much to reduce the threat of unexploded ordnance in Thailand, Cambodia, Laos, and Vietnam. Anticipated fiscal year 2001 funding will expand demining operations in those countries.

These security assistance programs, along with IMET, are crucial to our continued engagement in the Asia-Pacific region, and I request your continued support in their funding.

Center of Excellence in Disaster Management and Humanitarian Assistance (COE)

Since its beginning in 1994, the Center of Excellence in Disaster Management and Humanitarian Assistance has bridged the gap between civil and military activities related to humanitarian emergencies. Historically an annual increase to DOD appropriations has funded the COE. Collaborating the resources and strengths of governmental and non-governmental organizations, the Center of Excellence has participated in relief efforts following floods in Vietnam and Venezuela, earthquakes in Turkey and Taiwan, and population displacement in Kosovo and East Timor. The Center's approach to response, education and training, research, and consulting for disaster relief has become the model for successful interaction between the military and private humanitarian organizations.

CONCLUSION

In summary, Asia-Pacific issues are growing in importance on the American security agenda. Our people are the foundation for everything that we do, and providing professionally rewarding service must be our first concern. Next must be our strategy, and ensuring that we have the capability to sustain our forward basing, support increasingly information-rich operations, and the mobility to move our forces across this vast theater and across the globe. The coming year will continue to present challenges for the United States in the Asia-Pacific region. We neglect developments in the region at our peril, but with sustained attention we can help build a region which will support American interests over the long term.

APPENDIX A

Asia-Pacific Center for Security Studies

The Asia-Pacific Center for Security Studies (APCSS) is a regional studies, conference, and research center in Honolulu. Established in September 1995 as a preventive defense and confidence-building measure, its mission is to enhance cooperation and build relationships through mutual understanding and study of comprehensive security issues among military and civilian representatives of the United States and other Asia-Pacific nations. The cornerstone of the Center's program is the College of Security Studies, which provides a forum where future military and government civilian leaders from the region can explore pressing security issues at the national policy level within a multilateral setting of mutual respect and transparency.

to build trust and encourage openness. Central to the College's effectiveness are the relationships forged between participants that bridge cultures and nationalities. Full and unobstructed participation by all nations in the region, to include such countries as Indonesia and Cambodia, is essential to achieving this. Complementing the College is a robust conference and seminar program that brings together current leaders from the region to examine topical regional security concerns, including peacekeeping, arms proliferation and the role of nuclear weapons in the region, and energy and water security.

The Center directly serves to further our regional engagement goals in several ways. First, it serves as a resource for identifying and communicating emerging regional security issues, within the constraints of non-attribution. Second, the Center functions as an extremely effective "unofficial" engagement tool to continue critical dialog in cases where official mil-to-mil relations are curtailed. Recent conferences and regional travel involving contact with, or participation by, prominent representatives from China highlight this role. Additionally, the Center frequently coordinates or hosts conferences addressing topical issues of interest to the U.S. Pacific Command or the region. Finally, the Center serves as a forum for articulating U.S. defense policy to representatives from the region. Authorization to waive certain expenses as an incentive for participation, and expanded authority to accept domestic and foreign donations to help defray costs are crucial to the continued success of the Center.

Chairman WARNER. Now, General Pace.

STATEMENT OF GEN. PETER PACE, USMC, COMMANDER IN CHIEF, UNITED STATES SOUTHERN COMMAND

General PACE. Mr. Chairman, members of the committee, it is really an honor to have this opportunity to appear before you this morning, and thank you very much for that.

I would like to reserve most of the time available to answer your questions so we can get to the meat of what you want to know about, sir.

I would like to mention two things up front.

First is to thank you, sir, and the very strong bipartisan support of this committee that has enabled your Armed Forces to be as strong as we are to do what we do. Visits such as that led by Senator Levin and the members of his delegation and Senator McCain and the members of his delegation are very tangible evidence of the concern and leadership of our Congress and this Senate and this committee, and we very much appreciate that.

Second, sir, it is my great honor for the last 6 months to be the Commander in Chief of the U.S. Southern Command. The soldiers, sailors, airmen, marines, and coastguardsmen with whom I serve are absolutely first class, sir. They are wonderful young men and women. It is a distinct honor to serve with them. I would just like to highlight before this committee, sir, that your Armed Forces in this Nation are extremely well-served by the young folks who volunteer today.

With that, sir, I would like to answer your questions.

[The prepared statement of General Pace follows:]

PREPARED STATEMENT BY GEN. PETER PACE, USMC

INTRODUCTION

Mr. Chairman and distinguished members of the committee, thank you for this opportunity to present my assessment of security in Latin America and the Caribbean. I would also like to thank the Members of Congress and particularly this committee for your outstanding support to the United States Southern Command (USSOUTHCOM). I appreciate your interest in USSOUTHCOM's area of responsibility (AOR) and the support you have consistently provided to our mission with partner nations in this theater.

Since assuming command of USSOUTHCOM 6 months ago, I have traveled to 21 of the 32 countries and 3 of the 14 separate territories in my assigned AOR, visiting many of the Andean Ridge nations several times. I have met key military and civilian leaders in the region, and I have worked to ensure Southern Command's plans and initiatives are well-coordinated with the Joint Staff, the Office of the Secretary of Defense, and other U.S. government agencies. My visits to our neighboring nations have provided important insights to the region and its leaders, as well as to specific challenges and opportunities.

In this statement, I will provide the committee our strategic assessment of the AOR, highlighting the most serious transnational threats that challenge the growth of democracy in several countries. Next, I will detail our progress in resetting the theater architecture in the post-Panama era, followed by an overview of our engagement efforts and most important requirements. I will conclude by presenting my priorities for the way ahead.

STRATEGIC ASSESSMENT

U.S. Southern Command's AOR includes all of Central and South America, the Caribbean, and surrounding waters, totaling more than 15.6 million square miles. The AOR is divided into four sub-regions: the Caribbean, Central America, Andean Ridge, and the Southern Cone. Total population in the AOR exceeds 404 million people. Twenty-five languages are spoken, and the people practice 10 different religions. The theater is a diverse region, rich in natural resources with largely untapped industrial potential. Today, the per capita Gross Domestic Product (GDP) ranges from a low of about \$1,300 to a high of \$25,000.

The United States has strong economic, cultural, and security ties to Latin America and the Caribbean. More than 39 percent of our trade is conducted within the Western Hemisphere. Furthermore, 49 cents out of every dollar spent in Latin America is spent on imported goods and services from the U.S. Latin America and the Caribbean supply more oil to the U.S. than all Middle East countries combined. In addition to our strong economic ties, we share an increasingly strong cultural bond. Today, one of every eight Americans is of Hispanic origin, and that ratio is projected to increase to one in four by 2050.

Except for Cuba, all nations in the USSOUTHCOM AOR have some form of democratically elected government and free market economy. During the past 20 years, we have seen a positive trend as nations adopted democratic principles and institutions, subordinated their military to civilian leadership, instituted the rule of law, and promoted respect for human rights. However, democracies have not matured or flourished equally in the region. Some countries are struggling to complete the full transition to democratic rule. In other countries, democracy itself is at risk as failing economies, deteriorating security, and endemic corruption undermine institutions and public support.

Although several age-old border disputes still provide ample opportunity for disagreement between neighbors, this region does not have an arms race or a "shooting" war between nations. In fact, the region spends less per capita on arms than any area of the world. Today, democracies in this AOR generally maintain open and amicable relations with each other and reject armed conflict between nations.

THREATS

The greatest threats to democracy, regional stability, and prosperity in Latin America and the Caribbean are illegal migration, arms trafficking, crime and corruption, and illegal drug trafficking. Collectively, these transnational threats destabilize fragile democracies by corrupting public institutions, promoting criminal activity, undermining legitimate economies, and disrupting social order.

Illegal Migration. Illegal migration is a potential problem in our AOR. The ongoing violence in Colombia associated with fighting between illegally armed groups is expected to displace Colombian refugees across the international borders of neighboring nations. Panama and Venezuela have already reported displaced Colombian refugees inside their sovereign territory. Several countries that share porous borders with Colombia will remain vulnerable to illegal migration and incursions by armed insurgents and paramilitaries, resulting in political and social instability.

Arms Trafficking. The illegal trafficking of arms poses a serious threat to the national security of several nations. In our AOR, the breakup of the drug cartels in the early 1990s resulted in smaller, more adaptable drug trafficking organizations (DTOs) that have formed a symbiotic relationship with the insurgents and paramilitaries. These illegal and violent groups receive significant financial support from the DTOs, which they use to procure weapons. The insurgents can afford any-

thing available on the international arms market, possibly including man-portable air defense weapons systems (the possession of which we cannot confirm).

Crime and Corruption. Local and international criminal organizations are an increasing threat to the security and stability of the region. Many nations in the AOR lack the organization and resources to effectively counter criminal activity within their borders. In some areas, criminal organizations are so pervasive that the governments cannot effectively protect their citizens.

Although money laundering, kidnapping, extortion, and bribery of government officials are common criminal activities within many Latin American and Caribbean countries, the impact is regional, as evidenced by the recent kidnapping of oil workers in Ecuador. In calendar year 2000, Colombia reported more than 3,000 kidnappings. Although criminal activity in the Caribbean has typically been less violent and characterized as local, we are seeing a proliferation of street gangs.

Drug Trafficking. The illicit drug industry is a corrosive force that threatens the stability and rule of law in the Andean Region. Partner nation governments realize the importance of working together to develop regional approaches to counter the production and trafficking of illegal drugs. However, effective and sustainable counterdrug operations are beyond the capabilities of our partner nations' thinly stretched security forces. U.S. counterdrug assistance to security forces will help Colombia and other nations in the region develop more effective counterdrug capabilities while enhancing United States Government support to partner nation interdiction efforts.

Drug trafficking organizations have shown considerable skill in adjusting their operations in response to our counterdrug efforts. These small but efficient organizations will change the place of production, transport routes, points of transshipment, and markets when eradication or interdiction programs achieve success. Many DTOs provide financial support to the insurgents and illegal self-defense groups to secure protection from counterdrug operations conducted by the Colombia National Police (CNP) and Colombian Military (COLMIL).

We are encouraged by the success of cocaine eradication programs in Peru and Bolivia and by the initial results of Phase I of *Plan Colombia*. Unfortunately, reductions in Peru's and Bolivia's cultivation appear to have been offset by Colombia's increased coca cultivation in calendar year 2000. However, further assessment is required to determine the full impact of the intensive aerial eradication effort recently conducted by the Government of Colombia in the Putumayo Department.

The illicit drug industry is also a growing threat to the U.S. homeland. According to the most recent interagency assessment, law enforcement and security forces detected 645 MT of cocaine hydrochloride (HCl) moving toward the United States from the source zone during 2000. The assessment also reports that 128 MT were interdicted, leaving the possibility that an estimated 517 MT were available for domestic consumption. According to the Office of the National Drug Control Policy (ONDCP), nearly 17,000 Americans lost their lives last year to drug overdoses and drug related violence. In addition to this tragic loss of life, the direct and indirect costs of illegal drug use to the U.S. taxpayer exceeded \$110 billion.

THEATER ARCHITECTURE

The United States Southern Command, located in Miami but based in Panama until 1997, is responsible for planning, coordinating, and conducting all U.S. military activities in our AOR. We promote democracy and stability by working cooperatively with host nation security forces, responding to crises or contingencies such as the recent earthquakes in El Salvador, and supporting partner nation security forces and U.S. law enforcement agencies (LEAs) in reducing the flow of illegal drugs into the United States. To accomplish our mission, we have established the post-Panama theater architecture that includes our headquarters in Miami and component headquarters forward deployed in Puerto Rico.

Puerto Rico has replaced Panama for forward basing headquarters in the region. United States Army South (USARSO) has completed its relocation to Fort Buchanan, where it draws heavily on the Puerto Rican Army and Air Force National Guardsmen and Reservists to accomplish its assigned missions. United States Navy South (USNAVSOUTH) was activated last year and is collocated with Special Operations Command South (USSOCSO) at Naval Station Roosevelt Roads.

To compensate for the loss of the 8,500 ft. runway at Howard Air Force Base, the United States Government (USG) negotiated long-term agreements for the use of forward operating locations (FOLs) at Aruba-Curacao in the Netherlands Antilles, Manta in Ecuador, and Comalapa in El Salvador. These locations provide us the capability to conduct sustained CD operations throughout the source and transit zones. U.S. detection, monitoring, and tracking (DM&T) operations from the FOLs

improve our support to partner nation interdiction efforts. Thanks to the support of the U.S. Congress, funding has been provided for necessary operational and safety improvements for Manta and Aruba-Curacao and for construction design at Comalapa.

The Aruba-Curacao FOL provides effective, rapid response DM&T operations in the northern source zone, which includes the Guajira Peninsula of Colombia and the Venezuelan border region, as well as a large part of the transit zone. The formal 10-year access agreement with the Kingdom of the Netherlands was signed on March 2, 2000, but awaits final parliamentary debates and ratification.

The FOL at Manta extends our Airborne Early Warning aircraft coverage deep into the source zone. It is the only FOL from which aircraft can reach all of Peru, Colombia, and the drug producing areas of Bolivia. In January 2001, the Ecuadorian Constitutional Court issued the favorable ruling that the November 1999 access agreement complies with the country's constitution. Construction at the Manta FOL is on schedule. We will begin operating AWACS aircraft from Manta in October of this year and all construction will be completed by June 2002.

The Government of El Salvador offered the use of the Comalapa International Airport as an FOL for U.S. aircraft in Central America. Excellent relations between the U.S. and El Salvador, strengthened by years of solid military-to-military contact, helped produce favorable negotiations on the FOL agreement. This FOL extends the reach of our DM&T aircraft into the Eastern Pacific, Western Caribbean, and all of Central America.

In addition to our headquarters in Miami and three component headquarters in Puerto Rico, USSOUTHCOM has permanently assigned headquarters in the following locations: our Air Force Component (United States Air Force South) at Davis-Monthan Air Force Base in Arizona; our Marine Corps Component (United States Marine Corps Forces South) in Miami, Florida; Joint Interagency Task Force East (JIATF-E) in Key West, Florida, which plans, coordinates, and supervises the execution of our support to counterdrug operations in the transit and source zones; Joint Southern Surveillance & Reconnaissance Operations Center (JSSROC), collocated with JIATF-E in Key West, which receives, fuses, and disseminates the radar common operating picture from AWACS and ground based, aerostat, and ROTHAR radar; and Joint Task Force Bravo (JTF-B) in Soto Cano, Honduras, which provides responsive helicopter support to USSOUTHCOM missions in Latin America and the Caribbean.

Most of our post-Panama theater architecture is firmly in place, and we look forward to permanently anchoring our headquarters in CONUS, accomplishing necessary improvements at the FOL in Comalapa, and completing previously approved but temporarily suspended military construction projects in Fort Buchanan, Puerto Rico.

STRENGTHEN DEMOCRACY AND STABILITY

The United States Southern Command's military-to-military engagement with host nation forces seeks to build mutual trust and understanding that will engender regional stability and shared solutions to common problems. Our approach focuses on combined operations, exercises, training and education, security assistance, and humanitarian assistance programs. While maintaining strong bilateral relationships throughout the AOR, we promote regional cooperation and transparent operations among all our regional partners.

Caribbean. The fiscal year 1997 Unified Command Plan assigned responsibility for U.S. military activities in the Caribbean, a region of more than 32 million people, to USSOUTHCOM. The countries and territories in this region, as a rule, have very small security forces that need modernization and training assistance. They are receptive to regional cooperation and are well represented in the Organization of American States (OAS) and Caribbean Nation Security Council (CANSEC). During calendar year 2000, USSOUTHCOM conducted medical readiness training exercises (MEDRETE) and New Horizon engineer exercises; assisted partner nation security force training and new equipment fielding; and hosted Tradewinds 2000, a multi-national exercise that fosters maritime and land-based forces cooperation in response to regional crises and drug trafficking. In addition, many of the countries hosted other regional events to improve partner nation capabilities. For example, in January 2001, Jamaica hosted a regional disaster preparedness seminar that included representatives from more than 20 countries throughout the AOR.

Caribbean countries conduct operations and training with the United States Coast Guard that improve their capabilities to interdict illicit drug shipments through the transit zone. Most countries in the Caribbean have assisted U.S. efforts to interdict the flow of illicit drugs through the central and eastern Caribbean. One of our most

successful efforts is Operation Bahamas, Turks, and Caicos (OPBAT), a multi-agency international effort based in Nassau, Bahamas. The mission of OPBAT is to interdict the flow of cocaine and marijuana transiting through the Bahamas destined for the United States. OPBAT was established on July 12, 1990 by the TRIPART Agreement, a diplomatic engagement signed by the Governments of the Bahamas, the United Kingdom, and the United States. U.S. government agencies participating in OPBAT include DOS, DOD, USCG, and the U.S. Customs Service.

Another prominent counterdrug operation in this region is Weedeater, which is conducted in the Eastern Caribbean. DOD provides helicopters for host nation law enforcement agencies and DEA to conduct marijuana eradication. The most recent Weedeater operation eradicated 1,013,635 marijuana plants and seedlings with an estimated Miami street value in excess of \$800 million. Total helicopter operating costs for this Weedeater were slightly more than \$129,000.

Central America. Four factors stimulate our engagement initiatives in this region. First, Central America, with more than 36 million people, is one of the least developed regions in our AOR. The military budgets of these nations cannot support large forces or large modernization efforts. Second, this region is vulnerable to natural disasters, as evidenced by Hurricane Mitch a few years ago, wildfires last year in Guatemala, and the recent earthquakes in El Salvador. Third, powerful criminal organizations, often fueled by drug related activities and money, challenge democratic institutions, and in many cases, exceed the capacity of the nations' security forces to provide protection to the population. Last, governments in this region are understandably sensitive to border disputes that have been ongoing for many years. Examples include the border disputes between Belize and Guatemala, between Honduras and Nicaragua, and the maritime disagreement concerning the Gulf of Fonseca. Last summer, USSOUTHCOM helped diffuse the Fonseca disagreement by providing Global Positioning Systems (GPS) and night vision goggles to Honduras and Nicaraguan military vessels to aid them in precise navigation.

Military forces in this region range from none to very capable. Costa Rica and Panama now have only police forces, while El Salvador demonstrated a very professional and capable military force during recovery operations following the recent earthquakes. Nicaragua has a large inventory of mechanized equipment, but needs assistance in training and sustainment.

Our engagement activities in Central America mirrored our efforts in other regions. Last year, we relied heavily on our New Horizons Exercise program to provide much needed assistance to several communities in Belize, El Salvador, and Nicaragua. In total, our forces renovated 12 schools, drilled 12 water wells, and provided road and bridge improvements. We also conducted a total of 32 medical deployments that provided health and dental services to more than 95,000 people. Medical teams on these deployments provided veterinary services as well.

Peacekeeping operations and seminars are excellent vehicles to promote cooperation and interoperability between neighboring nations. This past year, we conducted several combined activities in Central America, including the Peacekeeping Operations—North (PKO—North) exercise, hosted by Honduras and attended by 20 nations. This exercise trained multinational staffs from Caribbean and Central American nations in peacekeeping operations.

Costa Rica, Guatemala, Honduras, Belize, El Salvador, and Panama have also participated in Central Skies counterdrug operations. In support of Central Skies, the United States provides transportation support to Central American country teams and host nation military and counterdrug law enforcement agencies. The most recent Central Skies operation in Costa Rica eradicated 385,563 marijuana plants with a Miami street value that exceeded \$300 million. U.S. helicopter operations costs for this iteration of Central Skies was approximately \$164,000.

USSOUTHCOM has a long history of providing assistance to Central American nations following natural disasters. Last April, JTF-B from Soto Cano provided emergency assessment and fire fighting assistance to help Guatemalan forces extinguish nearly 250 wildfires. In November 2000, Hurricane Keith hit the eastern coast of Belize. USSOUTHCOM provided humanitarian assistance to the Belize government in the form of emergency shelters, vehicles, disaster relief equipment, and medical supplies. In the most recent disaster in El Salvador, USSOUTHCOM provided emergency assistance that included the movement of 560 personnel and 160 tons of supplies by JTF-B helicopters. USSOUTHCOM relief and sustainment efforts following the earthquakes will include several medical readiness training exercises, technical expertise, and humanitarian assistance supplies and equipment.

Central America is key to U.S. counterdrug efforts. El Salvador agreed to allow the U.S. to use Comalapa International Airport as an FOL for counterdrug operations. This facility supports U.S. DM&T aircraft coverage in Central America, Eastern Pacific, and Western Caribbean. El Salvador's rapid agreement to our re-

quest for ramp space is reflective of the outstanding military to military relationship that has been nurtured over the years.

Southern Cone. Harmonious relations among Southern Cone countries provide the necessary preconditions for increased defense cooperation, dialogue, and multilateral training exercises. Keeping pace with new training opportunities, Chile and Brazil have recently begun military modernization programs. In December 2000, the Chilean government made a formal decision to negotiate the possible purchase of F-16 aircraft with Lockheed Martin. Brazil has also initiated programs to modernize its Air Force and Navy. In some neighboring countries, budget constraints still limit military procurement and modernization.

Argentina and Uruguay both participate routinely in United Nations peacekeeping operations. Last year, Argentina hosted the USSOUTHCOM annual CABANAS training program, a peacekeeping exercise that included military forces of seven other nations. Argentina and Chile each hosted phases of the UNITAS exercise, the largest multinational naval exercise in this hemisphere. In addition to nations from the USSOUTHCOM AOR, UNITAS 2000 included Canada and several European nations. This exercise is one of Southern Command's most important engagement tools and contributes significantly to regional cooperation in the Southern Cone.

Andean Ridge. USSOUTHCOM operations in the Andean Ridge are the most diverse of any region. Recent activities have included humanitarian civic assistance, demining operations, training exercises, and extensive counterdrug operational support. Militaries in this region range from small and under-equipped to standing forces with considerable capabilities.

One of USSOUTHCOM's most important and visible missions during fiscal year 2000 was Operation Fundamental Response in Venezuela. Following torrential flooding and mudslides that devastated Venezuela's northeastern coast, USSOUTHCOM performed life saving rescue, medical evacuation, and disaster relief operations. With Venezuela reporting an estimated 30,000 dead, USSOUTHCOM provided immediate rescue assistance, ultimately saving more than 5,500 lives and delivering 673 tons of food and water. U.S. forces, largely JTF-B aviation assets, Special Operations, and Reserves, produced more than 2.8 million gallons of potable water, flew more than 1,300 aircraft sorties, and distributed more than \$650,000 worth of medical supplies. Total cost of USSOUTHCOM directed support to Venezuela was \$8.25 million.

In Ecuador, USSOUTHCOM has worked closely with the U.S. Ambassador and President Noboa's administration to provide assistance to Ecuador's military, particularly in the management of national crises. We have also worked closely with military leaders to improve Ecuador's capability for detecting and interdicting illegal drug traffic. As previously noted, Manta Air Base on the northwestern coast is a linchpin in resetting our AOR architecture and extending the reach of our DM&T aircraft coverage in the source zone.

U.S. counterdrug support to Andean Ridge nations includes training and equipment for the riverine forces of both Peru and Colombia. The Joint Peruvian Riverine Training Center in Iquitos, Peru is the finest facility of its kind in the AOR. Peruvian and Colombian riverine units have significantly increased their capabilities during the past year.

USSOUTHCOM has provided extensive support to the training of Colombia's Counternarcotics (CN) Brigade. The second CN battalion graduated from training in December 2000, and the third battalion is scheduled to complete training on May 24, 2001. To provide air mobile capability to the CN Brigade, USSOUTHCOM is supporting the Department of State (DoS) led effort to field Huey II and UH-60L helicopters to the Colombian Army and to assist in training the required aircrews.

USSOUTHCOM is cooperating with the security forces of each Andean Ridge nation to build more effective counternarcotics capability. Bolivia, with perhaps fewer resources than any other country in the region, has achieved unprecedented success in eradicating illegal coca cultivation and aggressively interdicting drug trafficking organizations' (DTOs) movement of precursor chemicals. We have assisted Bolivia's military training effort with mobile training teams and facility construction. We are also assisting the Bolivian Army in renovating troop barracks to establish a permanent presence in the Chapare coca-growing region.

REQUIREMENTS

The United States Government has provided substantial support in military hardware, training, and services to Latin American and Caribbean countries. Each year, USSOUTHCOM executes engagement programs throughout this AOR, to include combined operations and training exercises, educational opportunities, mobile train-

ing teams, unit exchanges, humanitarian civic assistance, foreign military financing and sales, and counterdrug training and operations.

USSOUTHCOM's exercise program is the engine for our Theater Engagement Plan. USSOUTHCOM will conduct 17 joint or combined exercises and 178 training deployments with partner nations this fiscal year. We conduct four different types of exercises and deployments. First, our operational exercises are based on USSOUTHCOM contingency plans and normally include only U.S. forces. The primary purpose of these exercises is to train the CINC's and the JTF's battlestaffs.

Foreign military interaction (FMI) exercises are the core of USSOUTHCOM's engagement program. They are conducted throughout the AOR and are generally hosted by the many participating nations in the region. All of these exercises, which include *Únitas*, *Tradewinds*, *PKO North* and *South*, *Cabanas*, *United Counterdrug*, and *Fuerza Allidas Humanitarians*, are multilateral.

New Horizons (NH) are the command's civic assistance exercises that focus on engineering and medical projects. Humanitarian and civic assistance (HCA) projects are embedded in these programs but can be conducted as stand alone deployments for training as well. USSOUTHCOM plans to conduct six NH exercises in fiscal year 2001. Planned sites include the Bahamas, St. Lucia, St. Vincent, Guatemala, Honduras, and Paraguay.

The fourth type of exercise is stand-alone training deployments. USSOUTHCOM will conduct a total of 178 stand-alone training deployments in fiscal year 2001. These deployments will include Joint Combined Exchange Training (JCET), Riverine Training Teams (RTT), and Counterdrug Training Support (CDTS). Included in the training total are 66 stand-alone medical assistance deployments that predominantly support Central America and the Andean Ridge.

In a typical year, USSOUTHCOM deploys more than 12,000 servicemembers, the majority of which are National Guardsmen and Reservists, in support of the FMI and NH exercise programs. In fiscal year 1999, the U.S. Congress provided funding to expand the NH exercise concept. Funding has remained relatively constant for 2000 and 2001. These exercises have been very successful in providing schools, water wells, road and bridge improvements, and medical outreach programs to needy communities. NH exercises have the added benefit of providing U.S. forces with realistic training opportunities generally not available in the United States. In fiscal year 2000, USSOUTHCOM completed 98 HCA projects in 19 countries; 105 construction and repair projects are planned or fiscal year 2001. Scenarios for the seven FMI exercises conducted in fiscal year 2000 and the six planned for this year focus on peacekeeping operations, disaster relief, and counterdrug coordination.

International Military Education and Training (IMET) and its companion program, Expanded IMET (EIMET) provide professional education opportunities to selected military and civilian candidates in our AOR on a grant basis. These programs are the backbone of our combined professionalization and military education. They provide funding for military and civilian personnel from our partner nations to attend professional development courses in United States military institutions. At only modest cost, these programs represent valued investments as many of the students go on to become senior leaders in their respective militaries and government agencies. In fiscal year 2000, USSOUTHCOM received \$9.89 million for IMET and trained 2684 students, including 474 civilians. We invested roughly two-thirds of our IMET dollars in professional military education (PME), management, post-graduate courses, mobile education teams, and english language training. The remainder paid for technical assistance training throughout the AOR.

With declining military budgets, most countries in the USSOUTHCOM AOR request military equipment through the Excess Defense Articles (EDA) program or Section 506 Emergency Drawdown Authority. Few countries are able to purchase new equipment in large quantities through the Foreign Military Sales Program. Although we have been very successful in assisting partner nations through EDA and Drawdown, transport costs and sustainment of the received equipment fall to the requesting country. Absent host nation funding and the availability of foreign military financing (FMF), we have not been able to help these nations build the maintenance programs to sustain the equipment. At its peak in 1991, the FMF program for Latin America was \$220 million. Last year, the Caribbean received \$3 million, while Latin America received only \$450,000.

COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE (C⁴I)

As we reset our theater physical architecture in the post-Panama era, we are also enhancing our C⁴I architecture for fixed and mobile operations throughout the AOR. Because most of the countries in this theater are still maturing their C⁴ infrastructure, satellite communications are vitally important to our deployed forces, espe-

cially in time of crises. However, satellite communications are currently limited by available bandwidth.

We have initiated several programs to increase our C⁴I effectiveness throughout a very large AOR. Programs like the Cooperating Nations Information Exchange (CNIES) and the Counternarcotics Command and Management System (CNCMS) have helped optimize satellite bandwidth. We have also initiated the Theater Signal Support Program, which is focused on streamlining and enhancing C⁴ operational and maintenance support that was degraded by our exit from Panama.

INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE

Our top readiness priorities for this AOR remain intelligence, surveillance, and reconnaissance (ISR). Although OSD and the Joint Staff have helped us a great deal in this area, we still have unresourced requirements in national, theater, and tactical collection and processing for signals intelligence (SIGINT), human intelligence (HUMINT), and imagery intelligence (IMINT).

IMINT, SIGINT, HUMINT, and measurement and signals intelligence (MASINT) provide commanders at all echelons indications and warnings (I&W), situational awareness, battle damage assessments (BDA), and crop cultivation estimates. However, the current suite of national sensors and platforms meets only part of our requirement for a comprehensive intelligence and counterdrug picture in this AOR. USSOUTHCOM needs greater redundancy in ISR assets to mitigate risk during crises. Specifically, we need additional airborne quick-reaction ISR capability and the focus of a tactical military intelligence unit dedicated to this AOR. Funding support for planned and existing MASINT capabilities, plus an effective MASINT architecture, will significantly enhance the conduct of future operations.

The USSOUTHCOM AOR is a mixture of legacy and 21st century technology systems. While we are making progress in transitioning to more sophisticated and more reliable systems, we still need significant support for three important activities: wide area surveillance for maritime and ground detection and monitoring; theater air surveillance, tracking, and sorting; and force protection against asymmetric threats. First, a real-time integrated wide area surveillance capability is required to track and monitor maritime and ground targets of interest, particularly in support of counterdrug operations in this theater. This system should be compatible with both manned and unmanned ISR platforms. Second, the theater air surveillance system will provide air space detection, sorting, monitoring, and management that will promote regional cooperation in support of theater engagement strategies. Third, asymmetric warfare challenges our best force protection measures and strategies. Sophisticated surveillance systems are needed to enhance force protection for our limited number of forward-deployed personnel in high threat areas.

Our ability to execute effective operations is often hampered by restrictions on sharing data with our partner nations. We need to streamline sharing procedures that are currently used for time sensitive counterdrug information. Like other unified commands, we are developing information-sharing networks that will allow us to combat the drug trafficking problem more efficiently. The South American Net (SURNET), the Caribbean Information sharing Network (CISN), and the Cooperating Nations Information Exchange System (CNIES) are all ongoing initiatives that enable us to share certain types of counterdrug information expeditiously.

We experience continuing shortages of intelligence personnel, especially qualified linguists and other SIGINT experts. A fully manned and functioning regional SIGINT operating center at Medina, Texas, is essential to support our AOR operations. We also face many difficulties in our efforts to maintain a robust tasking, processing, exploitation, and dissemination architecture (TPED). Due to persistent C⁴I shortfalls, these issues are expected to continue in the near term.

COUNTERDRUG OPERATIONS

Congress appropriated significant funding last year to support President Pastrana's *Plan Colombia*. During the past several months, USSOUTHCOM has worked with the U.S. interagency to develop the plan and begin executing the support package. This program is on track and is increasing partner nation counterdrug capabilities. Although most of the supplemental funding was directed to Colombia, neighboring nations also received assistance.

USSOUTHCOM is using the funds designated for military purposes to improve partner nation capabilities in counterdrug operations. We are lead for execution of DOD support and provide assistance to DoS as needed on military related programs. We have coordinated the intended use of the funding in the U.S. interagency process to ensure our actions complement other agencies' activities and comply with congressional law and OSD directives. U.S. assistance to *Plan Colombia* will signifi-

cantly improve the COLMIL capability to successfully support eradication and interdiction operations. Although \$180 million was also distributed in the aid package to Colombia's neighbors, several of these neighboring nations will need additional assistance in the form of both military and non-military programs to effectively challenge the illicit drug industry within their own borders. We also anticipate that nations in this region, particularly Colombia, will likely need international assistance to sustain these programs in the long term.

FORCE PROTECTION

Force protection is Job #1. We are committed to providing the best possible protection measures to our forces in this theater. Since the terrorist attack on the U.S.S. *Cole*, we have conducted a comprehensive review of our force protection requirements and have focused our efforts on improving policies and procedures for deterring, disrupting, and mitigating terrorist attacks.

Each of my Component Commanders has formed "Red Teams" to assess his force protection posture on a continuous basis. Throughout the AOR, we have intensified ongoing efforts to identify potential threats and the corresponding force protection measures to mitigate risk to these threats. We are also looking specifically for seams in our force protection posture that could be exploited. We have implemented a suite of preventive measures, such as limiting travel to known or suspected high-risk areas, to minimize exposure of DOD personnel.

We have used the Combating Terrorism Readiness Initiative Fund to resource emergent and unforeseen high priority requirements. However, we still require better access to enhanced national signals collection and processing, organic airborne reconnaissance capability, a military intelligence unit permanently assigned to this theater, and expanded human intelligence collection. Our components continue to work with host nation security forces, to include establishing U.S. controlled security zones when necessary, to ensure protection of our deployed aircraft, vessels, and personnel. Component Commanders tailor threat conditions and random antiterrorism measures based on their assessment of the threat for assigned and in-transit units.

The U.S.S. *Cole* Commission recommendations address the diversity of threats that could potentially target U.S. personnel and interests in the USSOUTHCOM AOR. We continue to make good progress in hardening our headquarters, bases, and forward operating locations. Where we are unable to mitigate threats through physical or structural enhancements, we are addressing the risk with procedural modifications for our personnel.

STRATEGY

Our vision for this theater has not changed. These nations can become a "community of stable, democratic, and prosperous nations served by professional, modern, and interoperable security forces that embrace democratic principles and human rights, that are subordinate to civil authority, and are capable and supportive of multilateral responses to regional challenges."

Five objectives guide our engagement and security activities in this AOR:

- Promote and support stable democracies;
- Promote and support respect for human rights and adherence to the rule of law;
- Assist partner nations to modernize and train their security forces;
- Sustain and strengthen multilateral security cooperation; and
- Cooperate with regional forces to detect, monitor, and reduce the transit of illegal drugs.

CONCLUSION

Thanks to the hard work and vision of many U.S. Government agencies, we have been able to assist our neighbors, some gravely threatened by insurgencies, narcotics, and other transnational threats.

Because of this committee's efforts and the strong bipartisan support in Congress for programs key to this hemisphere, we are making a positive difference in helping to strengthen democracy, promote prosperity, and foster regional security in Latin America and the Caribbean.

Thank you again for the opportunity to appear before you.

Chairman WARNER. General Schwartz.

STATEMENT OF GEN. THOMAS A. SCHWARTZ, USA, COMMANDER, UNITED STATES FORCES KOREA; COMMANDER IN CHIEF, UNITED NATIONS COMMAND/COMBINED FORCES COMMAND

General SCHWARTZ. Sir, thank you very much for having me, Mr. Chairman, Senator Levin, and other committee members. Thanks a lot. I am glad to be here today.

It is exciting to be in Korea. I have been there 15 months. It is an exciting time. Like you said, Senator Warner, things are changing at a rapid pace. Who would have predicted that the summit would have taken place like it did last year? Who would have predicted the amount of dialogue, the exchange, the cultural exchanges, all the things that are happening, the Nobel Peace Prize, the Status of Forces Agreement (SOFA) revision that we had, a big success in my opinion, the Nogun-Ri and the resolution of that very successfully? The list goes on and on. Who would have predicted? Almost nobody. Then the visit of Kim Jong-Il to the south and the next couple of months. Who would have predicted? I do not think anybody could say "I knew positively that was going to take place."

But I can tell you one thing you could predict, that our forces over there stay trained and ready, the 37,000 you have there under my command, as well as those great Republic of Korea military. I am really high on them because when anybody from this committee comes, they look at them, they see them, they always comment to me. They say, "Tom, they are good. Are they not? They are trained and ready. Are they not? They are well-spirited and have high morale. Do they not?" Those are the kinds of things that are reinforcing about this alliance. We should be tremendously proud.

That 2nd Infantry Division we have over there, in my opinion, is the most well-trained, fit-to-fight division in the world. I am proud of what they do and the pace they maintain, the things they do every day to stay trained and ready on that Demilitarized Zone. I know you, Senator Warner, and the other committee members are very proud.

I think the key over there right now is our presence. We have been there for 50 years. We might be there for 50 more. We do not know. But I tell you, when the north looks south and they see 37,000, when they look south, and they see the 750,000 South Koreans trained and ready, they know for sure one thing: they are not going to do anything. They know we are ready. They know we are together, and that has deterred war for 50 years. We are tremendously proud of that.

We have to mix all of that readiness too with our quality of life and our infrastructure. We cannot just be trained and ready. We cannot just let Korea be a place we have been for 50 years, 1 year at a time, and not look at the infrastructure and not look at the quality of life of those great soldiers, sailors, airmen, and marines. So, I have looked at that, and I have talked to a lot of those great people. I am tremendously impressed with our soldiers.

I tell you, Senator, the other day I had a stand-up in front of those soldiers, and I said, "this is my third tour. Who has me beat?" One of those great sergeants, E-5, stood up and said, "Sir, I have been in 10 years. This is my fourth tour in Korea. I have you beat."

Then a staff sergeant E-6 stood up. He said, "Sir, I am a staff sergeant E-6 in this great Army of ours. I have 12 years, and I have five tours in Korea. I have you beat."

I started to look around. I started to think, gosh, these young men and women are recycling in here. When I started to do some statistics on this thing, I realized that 17 percent of the Army is either getting ready to go in, is in Korea, or just came out of Korea.

So, it does have a tremendous impact on our force and on the morale and on the reenlistment, and on the quality of life and decisions that these young people make every day when they sit down at the dinner table. They go back home after a tour in Korea, and they say to the family, should I stay or should I get out? So, Korea does have an impact. It matters. We have to care about what we do with our soldiers, sailors, airmen, and marines over there, every year as we touch those great people.

So, it is things like separate rations that we take away from them, that the spouse back home who loses \$227 a month and is still cooking the same pot of spaghetti, even though he is serving for a year over in Korea, and she is saying to herself, "Where is my \$227?" She is saying to herself, "Where is my \$4,000 that it equates to over a year? Where did that go?" She is asking her spouse, "how much is it costing you to live over there?" They are saying about \$4,000 to \$6,000 out of their pocket, hidden costs. Senator, you and I discussed this a couple of times.

There is a price to be paid by these young people when they serve their country overseas. We have to take a hard look at some of these things and make sure we are doing the right thing with respect to these people when they are sacrificing so much for us. So, I would lay that on the table.

But I would like to make a comment, if I could, Mr. Chairman, about the transformation that the Army is doing right now under the great General Shinseki. He is creating a new force. He is shaping a force, an Army that is much different than we had before. I told him I am the first guy to stand up and say, I want one of your brigades. I want one of those light brigades. I want one of those wheeled brigades. I want its flexibility. I want its mobility. I do not just want it for the peninsula, but I want it for the region. I want it because it can do a lot of things I cannot do right now. So, I am an advocate of what we are creating there, and I am one of the first ones to sign up as a CINC and say, send it to me because we can certainly use it.

A couple of my top priorities that I have in my statement are quite well outlined, but I would like to emphasize just a couple of them because I think they are important to lay on the table.

One is we have to look hard at the command, control, communications, computers, and information (C⁴I) architecture that we have in Korea. If we are going to fight tonight like we do, we have a bunker system. We have hardened systems of command and control that were created over the last 30 and 40 years, and we work hard to keep them fit to fight. But we have to keep putting the money into them to make sure they are hard, and to make sure they are redundant, and to make sure that they do for us what we need to do. So, I have some needs in that area that I laid out in my formal statement that I will submit.

Also, I think we need some money for our battle simulation centers. The way we keep 37,000 people trained and ready, when 96 percent of them change every year, is that we have three very robust exercises. We have the largest simulation exercise in the world called Ulchi Focus Lens (UFL). To run that battle simulation center, to run the Air Force simulation center, costs a lot of money. That cost is going up and up. So, I laid some dollars on the line there that we need to keep that going.

I would just mention one other area, and it is called force protection. We are now in the second most densely populated country in the world, Korea, 45 million people in a peninsula the size of the State of Indiana. We have plopped ourselves down in 95 camps and stations all over that peninsula. Believe me, we did not have any thoughts when we plopped down about force protection, but we have a lot of thoughts about it today. We need some money and we need to put some effort into it. We need to do some consolidation of that effort as we see ourselves on that peninsula to make sure we are protecting our people, like we need to protect them all over the world. So, I would say that to you.

But when you look across that peninsula, Senator Warner, and you look north, some people down south think, well, the security situation is changing and everything is OK and there is no threat. But I am telling you as a Commander in Chief, when I look north, I do not think the same thing. When I look north, I see an enemy that is bigger, better, closer, and deadlier. I can prove it.

This guy puts 33 percent of his gross national product into his military. People are starving. His own figures say that 250,000 starved last year. We think it is close to a million. Whatever the figure is, he puts more money into his military than any other nation Gross Domestic Product (GDP)-wise, 33 percent. He has a military-first policy and he is getting better.

Now, does he have the economy to sustain that great military? Yes. It is coming apart a little bit. It is coming down and we all know that. But the fact of the matter is he is very capable, bigger, better, closer, and deadlier and we have to keep our eye on it.

This is a period of uncertainty like I said. Tremendous change, dramatic change. I think the danger during this period of time is miscalculation. We just have to keep ourselves trained and ready. We are doing that in the peninsula, and I am tremendously proud of those soldiers, sailors, airmen, and marines.

I am prepared to answer your questions.

[The prepared statement of General Schwartz follows:]

PREPARED STATEMENT BY GEN. THOMAS A. SCHWARTZ, USA

Mr. Chairman and distinguished committee members, I am honored to appear before you as Commander in Chief, United Nations Command, Republic of Korea—United States Combined Forces Command (CFC); and Commander, United States Forces Korea. We want to first express our deep gratitude to Congress for the consistent support you provided our forces over the years. The more than 37,000 soldiers, sailors, airmen, and marines, and Department of Defense civilians of United States Forces Korea benefit every day from your support, which enables us to accomplish our vital mission. We welcome this opportunity to present the current security situation in the Korean theater of operations through five major categories: (1) *Korean Peninsula Overview*, (2) *Post-Summit Korea: Perceptions vs. Reality*, (3) *North Korea*, (4) *The Republic of Korea and United States Alliance*, and (5) *Command Priorities*.

KOREAN PENINSULA OVERVIEW

The physical presence of U.S. ground, air, and naval forces in Korea and Japan contributes significantly to U.S. and northeast Asian interests. These contributions endure well into the future. As shown in the figure below, the vital U.S. national interests in the region are many, and the threats to those interests are great. However, the U.S. presence provides the military access in east Asia that allows and encourages economic security, and political stability.

While the U.S. has made great strides in our ability to rapidly project power around the globe, there is still no substitute for some degree of forward presence when faced with limited warning times, and vast distances. Our presence in Korea provides the access necessary for defending the Republic of Korea today, and responding to regional threats in the future. It is physical, not virtual, U.S. presence that brings peace of mind to the democratic nations of the region, and provides tangible deterrence.



The security offered by this presence is directly and indirectly responsible for the economic vitality and political stability of the region. The physical security has fostered the rapid expansion of the mutually reinforcing elements of democratization and market economies. The political and military stability resulting from U.S. involvement in northeast Asia provides the confidence necessary for foreign investment to flow into the region. The results are staggering. In the course of a single generation, Japan, China, Taiwan, Korea, and Singapore have risen respectively to numbers 3, 4, 7, 8, and 10 in total trade with the U.S., and comprised over \$425 billion in trade in 1999. Most of this would not have been possible without the direct security offered by the U.S. presence. It is the U.S. presence that will allow this regional prosperity, so critical to the global economy, to flourish in the future.

POST-SUMMIT KOREA: PERCEPTIONS VS. REALITY

In June of last year, the world witnessed the historic meeting between President Kim Dae-Jung and Chairman Kim Jong-Il. This remarkable event, the centerpiece of a great deal of diplomatic activity on the Korean peninsula, touched off a wave of reconciliation euphoria in South Korea and generated the public perception that peace was just around the corner. However, the situation's reality is far from the perception.

The pace of diplomatic activity is indeed staggering. Both before and since the summit, the North Korean government has greatly expanded its diplomatic outreach to a number of countries. Three reunions of families separated since the war have occurred since August 2000. Athletes from both sides marched together under a single flag during the opening ceremonies of the Sydney Olympics. North Korea's sec-

and most powerful official, Vice Marshal Jo Myong-rok met with President Clinton in October. U.S. Secretary of State Albright reciprocated by visiting Pyongyang later that month. Since the summit, the two Koreas have conducted multiple ministerial and working level economic talks, and the first ever meeting between the two defense ministers. The two sides have agreed to restore the Seoul-Sinuiju railway through the Demilitarized Zone (DMZ), create an economic development zone in the North Korean town of Kaesong, and conduct sports and cultural exchanges.

Despite this welcome increase in direct North-South dialogue, the military threat from North Korea continues to improve. The perception of a peaceful peninsula differs from reality. North Korea has yet to discuss or implement any meaningful military confidence building measures beyond agreement of the opening of a railroad corridor through the DMZ. The North has focused thus far on obtaining significant foreign aid in exchange for political and humanitarian gestures. As recently as December 2000, the North threatened to halt the entire reconciliation process, including family reunions, unless the South immediately provided 500,000 kilowatts of electrical power, to be followed by up to 2 million kilowatts. It subsequently resumed the exchanges even though it did not receive the power.

The gap between reduced political tensions and the current North Korean military capacity and capability in certain areas concerns us. If the North Korean regime is serious about reconciliation, it is the time now for it to reduce the military threat and reciprocate to the peaceful gestures from other nations. North Korea should begin now to reduce military capabilities, both conventional and weapons of mass destruction.

NORTH KOREA

Despite the perception of political and humanitarian change, the reality is that there is as yet no permanent "peace dividend." North Korea still poses a major threat to stability and security in the region and will continue to do so into the foreseeable future. Kim Jong-Il stubbornly adheres to his "military first" policy, pouring huge amounts of his budget resources into the military, at the expense of the civil sector, as he continues his military buildup. As a result, his military forces are *bigger, better, closer, and deadlier* since last year's testimony. We define this dangerous military threat in simple terms as *capability* and *intent*.

Capability: Bigger and better. The military is the overwhelming power and dominant presence in North Korea. Its ability to strike South Korea without warning and to employ nonconventional weapons and systems continues to grow bigger and get better. The North Korean People's Army, which includes the Army, Navy, and Air Force, numbers over 1.2 million, making it the fifth largest Active-Duty Force in the world. Limited military production continues in aircraft and artillery systems with renewed manufacturing efforts in missiles, submarines, and armored vehicles.

The ground force alone numbers 1 million active-duty soldiers and ranks third in the world. The North Korean Air Force has over 1,700 aircraft. The Navy has more than 800 ships, including the largest submarine fleet in the world. There are an additional 6 million Reserves supporting the Active-Duty Force. In total, over 25 percent of its population is under arms, with all able-bodied children and adults receiving military training every year—although admittedly in a country where "the quest for food" is a daily reality for the average citizen and the vast majority of people lack adequate food, clean water, heat, clothing, or access to even basic medical care.

Recent force improvements include forward repositioning key offensive units, emplacing anti-tank barriers in the forward area, establishing combat positions along major routes between Pyongyang and the Demilitarized Zone, improving coastal defense forces in the forward area, constructing missile support facilities, and procuring air defense weapons and fighter aircraft. Applying lessons from U.S. operations in Europe and Southwest Asia, the North Koreans also modified key facility defenses, dispersed forces, and improved camouflage, concealment, and deception measures.

Training levels over the past 2 years have been record-breaking, with the focus on improving the readiness of major offensive forces. Immediately following the June 2000 summit, the North Korean People's Army training cycle in the summer of 2000 was the most extensive ever recorded. It was preceded by the most ambitious winter training cycle for the past 10 years. High levels of training continue as we speak to you today.

Capability: Closer. As big as they are, North Korea continues to position forces into the area just north of the DMZ—in a position to threaten Combined Forces Command and all of Seoul with little warning. Seventy percent of their active force, including approximately 700,000 troops, over 8,000 artillery systems, and 2,000 tanks, is postured within 90 miles of the Demilitarized Zone. This percentage con-

tinues to rise despite the June 2000 summit. Most of this force in the forward area is protected in over 4,000 underground facilities, out of over 11,000 nationwide. From their current locations, these forces can attack with minimal preparations or warning. The protracted southward deployment follows a tactic of "creeping normalcy"—a significant movement over a period of many years that would attract too much international attention if accomplished over weeks or months.

The North fields a total artillery force of over 12,000 systems. Without moving any pieces, Pyongyang could sustain up to 500,000 rounds per hour against Combined Forces Command defenses, and Seoul, for several hours. This artillery force includes 500 new long-range systems deployed over the past decade; however, most dangerous is the accelerated deployment over the past 2 years of large numbers of long-range 240 mm multiple rocket launcher systems and 170 mm self-propelled guns to hardened sites located along the DMZ. Current training continues to improve their capabilities.

Capability: Deadlier. To keep Combined Forces Command off balance and offset the conventional military technological superiority of the United States and Republic of Korea, the North's leadership has developed substantial asymmetrical capabilities in *ballistic missiles, special operations forces, and weapons of mass destruction*. The North's asymmetric forces are dangerous, receive an outsized portion of the military budget, and are well trained. Improvements continue in each area.

The North's progress on its *ballistic missile* program indicates it remains a top priority. Over the past year, North Korea upheld its moratorium on flight-testing missiles. However, they continue to make enhancements in their missile capabilities. Their ballistic missile inventory includes over 500 SCUDs of various types that can threaten the entire peninsula. They continue to produce and deploy medium-range No Dongs capable of striking Japan and our U.S. bases there. Pyongyang is developing multi-stage missiles aiming to field systems capable of striking the continental United States. They have tested the 2,000-kilometer range Taepo Dong 1 and continue significant work on the 5,000 plus kilometer Taepo Dong 2. North Korea also threatens American interests through the proliferation of ballistic missile capabilities—missiles, technology, technicians, transporter-erector-launchers, and underground facility expertise—to other countries of concern. North Korea has reportedly sold at least 450 missiles to Iran, Iraq, Syria, Pakistan, and others.

At the tip of the spear are North Korea's *special operations forces*—the largest in the world. They consist of over 100,000 personnel and are significant force multipliers. During wartime, these forces, which Kim Jong-Il would use as an asymmetrical capability from a ground, air, and naval perspective, would fight on two fronts, simultaneously attacking both our forward and rear forces. They continue to train year around in these skills, and just completed a robust training period last month.

North Korea also possesses *weapons of mass destruction*. A large number of North Korean chemical weapons threaten both our military forces and civilian population centers. We assess North Korea to have large chemical stockpiles and is self-sufficient in the production of chemical components for first generation chemical agents.

Additionally, North Korea has the capability to develop, produce, and weaponize biological warfare agents. They could deploy both chemical and biological warheads on missiles.

Finally, we continue to be concerned with the potential nuclear threat from North Korea. In the late 1980s and early 1990s, North Korea may have produced enough plutonium for at least one, and possibly two nuclear weapons.

Intent: The Kim Jong-Il regime maintains a "military-first" orientation. The army is North Korea's largest employer, purchaser, and consumer, the central unifying structure in the country, and the main source of power and control for the ruling clique—the "pillar of the revolution." North Korean state-run media pronouncements continue to insist on unification under Kim Jong-Il's leadership. In an unprecedented interview with ROK news media executives on August 12, 2000, Kim Jong-Il stated, "In relations with foreign countries, we gain strength from military power, and my power comes from military power," thus openly stating his belief that military power is his security imperative and the cornerstone of his philosophy. This "military first" policy was reiterated in the North Korean leader's New Year's editorial on 1 January this year. Maintaining a large and credible military force does a number of things: It provides deterrence, defense, an offensive threat, and gives the regime leverage in international negotiations.

The North Korean economy is in ruins. Let's take a look at some stark numbers: a decline in Gross National Product (GNP) by 55 percent from 1990 to 1998, down to about \$12 billion; a foreign debt approaching the same figure; foreign trade at only 10 percent of GNP; per capita income of less than \$600; many factories closed, with those remaining open in operation at less than 20 percent of capacity; daily grain rations for common people at between 100 and 200 grams (one-half to one

bow); estimates of the number of deaths from hunger and disease in the last 5 years ranging from several hundred thousand to three million—despite foreign aid of over \$1.6 billion since 1995. The result of this past winter's harsh weather—the worst in over 2 decades—will likely be thousands of deaths, serious injuries, and major illnesses among the general populace.

In the face of this human tragedy, North Korea continues to invest 25 to 33 percent of their GNP annually in the military (as compared to 3 percent in the U.S.). Top priority for the nation's scarce economic resources are the military related industries. For additional hard currency infusion, the North Korean regime continues to export weapons and engage in state sponsored international crime to include narcotics trafficking, and counterfeiting U.S. currency.

Without major fundamental economic reforms, the North will continue to rely on charity to avert complete economic collapse. Absent a sustainable economic turnaround, the North faces the potential for huge humanitarian disaster. The North Korean leadership appears to recognize its dire economic circumstance. The economic and human weakness brought by natural disaster and the failure of state planning likely prompted the diplomatic offensive that we are seeing from the North Korean regime. However, until North Korea undertakes meaningful confidence building measures, it will be necessary for the United States and our allies to remain vigilant against the threat posed by North Korea's sizable military machine.

Conclusion: While the growing inter-Korean dialogue evident over the past year gives cause for hope, the tense security situation on the Korean peninsula is unpredictable and serious, and will so remain for the foreseeable future. The North Korean military remains the main element of national power and source of leverage that Kim Jong-Il possesses to advance his interests. *Despite North Korea's continuing interests in foreign aid and economic reform, the Kim regime continues to field far more conventional military force than any conceivable sense of self-defense would warrant. We and our allies in the Pacific must encourage tangible military confidence building measures that are verifiable and reciprocal. The measures taken so far (economic, diplomatic, and cultural) are first steps, but tangible military measures are key to reducing the risk of conflict. Throughout this process and into the future, the unequalled ROK-US alliance will remain vigilant, trained, and ready to fight and win decisively!*

THE REPUBLIC OF KOREA AND UNITED STATES ALLIANCE

The Republic of Korea and United States alliance remains the best in the world. It is an alliance built on mutual trust, respect, a common set of values, and commitment to the defense of freedom of South Korea. Our combined forces can fight and win today if called upon. Our power, might, and daily readiness are unparalleled. Unquestionably, our South Korean partners are professional war fighters. They can mobilize over 4.5 million servicemembers and can bring 54 divisions to the fight. Our combined war fighting assets include over 1,500 strike aircraft that can launch over 1,000 daily sorties, over 1,000 rotary aircraft, more than 5,000 tracked vehicles, 3,000 tanks, and over 250 combat ships to include 4 or more carrier battle groups. If necessary, this unequalled combined combat power and might can defeat a North Korean attack and destroy its military and regime. It is this power and might that strengthens our deterrence mission and ultimately provides regional security.

Our continuing cooperation and understanding is a success story in many ways. It is institutionalized in our Mutual Defense Treaty and in our Security Consultative and Military Committee Meetings. Four alliance areas deserve particular note: *alliance successes, military procurement, defense burdensharing, and a brief discussion of command initiatives* that will shape our alliance.

Alliance successes: Overall, our alliance is stronger because of U.S.-South Korean cooperation to conclude three significant issues in the past year. Most notably, we successfully revised our Status of Forces Agreement, which safeguards the rights of our servicemembers while better respecting the laws, customs, and culture of the Republic of Korea. Second, both nations concluded a cooperative investigation on the tragic events that occurred 50 years ago at the Korean village of Nogun-Ri. Here again, this issue has been resolved in a manner that is consistent with an alliance based on democratic ideals and an honest quest for truth and accountability. Finally, South Korea, in consultation with the U.S., established a policy of developing operational missiles with a range of no more than 300 kilometers and a payload of 500 kilograms, which are the Missile Control Technology Regime limits.

Military Procurement: *The Defense White Paper 2000*, published by the Ministry of National Defense, addresses aggressive modernization goals for the South Korean forces. United States Forces Korea wholeheartedly supports these efforts and feels that they will set the conditions for an autonomous South Korean military in the

future. Modernization and improvements are being made in many key areas through indigenous production, co-production, and procurement through Foreign Military Sales. South Korea continues to demonstrate overwhelming preference for U.S. military equipment. South Korean military purchases from the U.S. as a percentage of total foreign procurement has ranged from 59.2 percent to 98.9 percent in the last 10 years. The decade average is 78.6 percent.

Last year the South Korean military purchased Multiple Launch Rocket Systems (MLRS), theater airborne collection systems, and weapons and electronics upgrades for their newest destroyers. Additionally, we are encouraged by the serious consideration that the Republic of Korea is devoting to purchase the F-15E strike fighter jet, the AH-64D Apache Longbow attack helicopter, and the Patriot (SAM-X) missile systems. These powerful systems are interoperable with U.S. systems and will ensure that military might can be brought to bear quickly and decisively, at a time when it may be required. Not only will these systems improve today's alliance combat power, they also contribute to the future regional security for Northeast Asia.

There are three areas where the Republic of Korea must procure capabilities to support our combined combat readiness: (1) Command, control, communications, computers, and intelligence (C⁴I) interoperability; (2) Chemical and biological defense capabilities; and (3) Preferred munitions necessary for the early stages of the war plan.

Defense Burdensharing: Of the four burdensharing categories in the *2000 Report to Congress on Allied Contributions to the Common Defense*, South Korea met the congressional goal in one. The Republic of Korea increased the number of peacekeepers in support of multinational military activities, primarily in East Timor. The Republic of Korea did not meet congressional targets in the three other areas: (1) cost sharing, (2) defense spending as percentage of Gross Domestic Product, and (3) foreign assistance. This is a downward trend from the previous year and must be reversed, as key U.S. congressional leadership has articulated.

In the cost-sharing category for fiscal year 2000, the Republic of Korea paid \$751 million out of \$1.83 billion United States non-personnel stationing costs. This is a 41 percent contribution that fell short of the congressional 2000 goal of 75 percent. The U.S. and South Korea enter negotiations this year to adjust this level of cost sharing and sign a new Special Measures Agreement. The Republic of Korea must raise its present percentage of non-personnel stationing costs. The U.S. State Department concurs.

South Korean defense spending as a percentage of Gross Domestic Product dropped from 3.2 to 2.8 percent between 1998 and 1999. The 1999 value of 2.8 percent was below the U.S. defense investment of 3.2 percent.

South Korean outlays for foreign assistance failed to increase by 10 percent between 1998 and 1999, and at 0.04 percent of Gross Domestic Product, they fell below the congressional goal of 1 percent.

Command Initiatives: During this past year, we have developed a number of initiatives designed to better meet the needs and demands of our great alliance. The most important of these are support to the North-South *transportation corridor*, the "*good neighbor*" initiatives, *environmental programs*, and the *Land Partnership Plan*.

The United Nations Command will continue to fully support President Kim Dae-Jung's reconciliation process and the development of a road/rail *transportation corridor* through the Demilitarized Zone. The command has already modified the 1953 Armistice Agreement to allow the Republic of Korea to coordinate construction issues on behalf of the Military Armistice Commission. Close cooperation between United Nations Command and the South Korean Ministry of National Defense has, and will continue to ensure sufficient levels of security in the Demilitarized Zone during demining, corridor construction, and future operation. As we work closely with North Korea over issues concerning access and commerce in this corridor, we will continue to insist that all actions, and all confidence-building measures, are both reciprocal and verifiable.

During the summer of 2000 the command and the government of South Korea initiated comprehensive *good neighbor initiatives* in response to an alarming rise in "anti-U.S. Forces Korea" sentiment that turned violent in some situations. The program includes education programs for both U.S. servicemembers and the Korean public, public affairs programs to offer a balanced perspective to the Korean press, and increased interaction between U.S. servicemembers and local Korean military units and citizens. To educate and nurture an understanding between our servicemembers and South Korean citizens we began a bilingual quarterly newsletter jointly published by U.S. Forces Korea and the South Korean government, and posted on the Korean Defense Ministry's internet website. Still in its infancy,

these initiatives have already paid dividends and will continue to do so into the future.

Being good stewards of the *environment* in our host country is important to our mission and the alliance. We have accomplished much but there is more we will do. Future problem mitigation and environmental protection requires continuous funding from both the Republic of Korea and United States. Our investment in protecting the Korean environment is the responsible course that serves to strengthen our alliance.

The final future initiative is the *Land Partnership Plan* begun in December 2000 with our Korean partners. This program seeks to improve the combined forces readiness posture, improve force protection, enhance public safety, stop training range encroachment, advance quality of life for U.S. forces, support South Korean economic growth, and posture our forces for cooperation well into the future. The combination of a robust and growing Korean economy, rising population, and very limited land on the Korean peninsula is placing extreme pressure on the command. Encroachment by farming and construction on training ranges and in safety zones around ammunition storage areas endangers the public and is lessening our ability to properly train. This initiative will reconfigure and protect training areas, and consolidate our forces around hub installations. Both nations stand to gain significantly from this effort, but the program requires strong support from the Korean government. U.S. Forces Korea must have access to small new purchases of rural land for consolidation before we can release large areas of valuable urban land and facilities. Additionally, both sides must approach the plan as an integrated whole, and not piecemeal the package, to maximize benefits.

COMMAND PRIORITIES

During my comments today, I will discuss the status of programs and programmatic areas in which resource allocations are of significant concern to me. My intent is to discuss possible problem areas as they now appear. However, these program areas and their associated funding levels may change pending the outcome of the new administration's strategy and defense review which will guide future decisions on military spending. For fiscal year 2002, the President's budget includes funding to cover our most pressing priorities. I ask that you consider my comments in that light.

Achieving our vision and accomplishing our missions requires us to prioritize scarce resources. Our command priorities are (1) *War Fighting Readiness*, (2) *Support to War Plans*, (3) *Force Protection*, (4) *Future Force Development*, and (5) *Quality of Life*.

War Fighting Readiness: Our number one command priority of war fighting readiness consists of *training, exercises, and headquarters operations*:

Training is the cornerstone of our combat capability and level of readiness. Our combined forces continue to remain trained and ready. We can fight and win! The North knows it. They fear our power and might. We are fully capable of decisively defeating North Korea and destroying the regime. However, the command faces significant training challenges ranging from training range encroachment to required modernization. We need to reverse problems in three specific areas: (1) Training area requirements, (2) Korea Training Center modernization, and (3) Realistic urban operations training facility.

Our first concern is that our joint forces experience a lack of adequate training areas on the peninsula. The problem stems from training areas being widely dispersed, non-contiguous, often temporarily unavailable, and too small to support the range of our modern weapon systems. Current training areas also suffer from sustained civilian construction and farming encroachment. The Land Partnership Plan addresses this urgent problem by consolidating and protecting necessary training areas. The new Incheon International Airport scheduled for full operation in 2003 creates additional problems for airspace management. The Republic of Korea government must energize a realistic and near term program to improve their airspace management system. Failure to do so will increase the risk for both commercial airlines and military aircraft.

The second long-term challenge is the support for our Korea Training Center, Synthetic Training Environment Vision. Currently, we have the ability to train a battalion task force in the live environment at the Center but only under manpower intensive, manually supported efforts. We need to increase training realism by modernizing range instrumentation. We are working with Department of the Army to fund this requirement.

To squeeze the most benefit out of every training minute and dollar, we must infuse new training technologies. In the near term, full funding of our joint exercise

program is critical to maintaining our current level of readiness. Currently, our vital simulation centers (Korea Battle and Korea Air Simulation Centers) are not fully funded which requires us to reprogram dollars from other programs to fund these readiness enablers. This is a less than ideal situation. Third, and finally, urban combat training is imperative for all forces in Korea as urbanization now dominates South Korea, the second most densely populated country in the world. We greatly appreciate the fiscal year 2001 military construction (MILCON) you provided and efforts are ongoing to construct our Combined Arms Collective (urban warfare) Training Facility. However, instrumentation for this critical project is not funded. To achieve the maximum training benefit from this facility, we need to install the prescribed instrumentation systems.

The second component of war fighting readiness is *exercises*. Both the content and timing of our combined and joint exercises successfully posture this command to deter, defend, and decisively win a military engagement. Exercises equal deterrence! Because of the proximity of the threat, the complexity of this theater, and our high personnel turnover, we must conduct robust theater level exercises annually to maintain combat readiness. Each exercise is unique and focused on a different essential component of the combined war fight. **The loss or reduction of dollars to support these exercises will weaken readiness and deterrence, and hamper our combined forces training to fight and win.**

Our vital Chairman of the Joint Chiefs of Staff exercise support is currently under-funded. Budget constraints have seriously impacted our joint and combined exercise program. The combination of the increasing cost of strategic lift, and a flat-line strategic lift budget, has degraded our exercise strategic lift capability. It would be unwise to let this continue over the Future Years Defense Plan (FYDP).

We will try to maintain our major exercises, but we must not sacrifice realistic, quality training opportunities in the process. Again, we must monitor our cuts carefully because these exercises are not hypothetical—they are the exercising of real, “go to war” plans. Korea is the only theater in the world where real war plans drive all exercises.

Finally, we need significant help with our *headquarters operations*. We anticipate needing additional funding in this area in order to conduct day-to-day operations in the headquarters for United Nations Command, Combined Forces Command, U.S. Forces Korea, and Eighth U.S. Army.

Support to War Plans: The four principle categories of support to war plans are *logistics; personnel; command, control, communications, computers, and intelligence (C⁴I); and intelligence capability*. Although we have made great strides in recent years, all four categories require additional support.

The distance between the northeast Asian theater and the U.S. make *logistics* support a healthy challenge to overcome. The task that is most vital to our success in Korea is the current readiness of our forward deployed forces. It is time to change the way Korea-based units are viewed in our logistics system. Instead of considering our forces as forward based or stationed, we must be considered “forward deployed” in much the same manner as forces in the Balkans. The proximity of the enemy and short warning times mandate our forces be ready to fight tonight. In order to “fight tonight,” our units must have the supplies and equipment necessary to defeat any attack. We will defeat any North Korean attack early, while our augmentation forces and supplies are overcoming the tyranny of distance from the United States. To accomplish this our forces must have a support priority equal to the highest priority of each of the four services. We intend to work through the services to improve this posture.

Intra-theater sea and airlift form the cornerstones of our ability to integrate forces and provide responsive theater support during conflict. We fully support the Army's initiative to forward station Army watercraft close to northeast Asia. We also are avid supporters of Air Force programs that will ensure adequate availability of C-130 and C-17 aircraft for intra-theater lift during a crisis. The geography of the Korean Peninsula makes the effective use of theater-controlled air and sealift essential to our success.

The limitations of airlift and sealift to rapidly move forces and supplies to Korea are a concern. We fully support the planned and continued modernization and maintenance of our Defense Department's strategic enroute infrastructure.

The U.S. also needs to improve the strategic deployment triad: (1) For airlift, this means a robust acquisition program for the C-17, increased efforts to improve the reliability of the C-5, and strong support for the Civil Reserve Air Fleet; (2) For sealift, this means the completion of our Ready Reserve Force and Large, Medium Speed Roll-On, Roll-Off programs; and (3) For pre-positioning programs, this means 100 percent fill of equipment and adequate sustainment for these programs for all services.

Pre-positioning programs for equipment offer us the ability to reduce the strategic movement requirements early in any conflict. In Korea, our ability to defeat a North Korean attack is critically dependent upon the pre-positioning of key items of equipment and supplies. We primarily focus on the Army's brigade set of equipment and supplies, the pre-positioning of critical munitions and repair parts, and the location of assets critical to our ability to integrate and sustain forces early in the fight. Our pre-positioning programs focus on the initial 15 to 30 days of the campaign while the United States' strategic sustainment base gears up. We have shortages with regard to our stocks of preferred munitions, Air Force replacement parts, replacement ground combat systems, and the Army's pre-positioned Brigade set.

Key logistics and sustainment shortfall remains in Army Prepositioned Stocks (APS-4). Sustainment shortfalls limit ability to reconstitute the force and sustain missions, resulting in increasing risk. Significant major end item shortages do exist. Lack of repair parts and major assemblies with the APS-4 sustainment stockpile will directly impact the ability to return battle-damaged equipment to the fight. The current funding stream does not adequately support sustainment shortfalls in APS-4. However, the Army's current plans are to cascade additional equipment into APS-4 sustainment stocks over the next couple of years, thus reducing the shortfall. We *strongly* support the services' requirements to improve our ability to sustain combat operations. Failure to support these requirements increases our risk.

The second element of supporting our war plans is *personnel*. Our main challenge is the turnover of our people. In a theater with approximately 95 percent turnover per year, the small size of our joint staff is currently our major concern. We are manned at about 34 percent of our wartime staff requirements. In addition, new mission areas such as force protection, information assurance, information operations, and critical infrastructure protections are being established without any authorized billets. We cannot continue to handle new requirements without the manpower to do the job. This must change. Korea cannot go on at the 34 percent manning level.

We are most concerned about our command and control systems. Today, severe deficiencies in **command, control, communications, computers, and intelligence (C⁴I)** functionality impairs our ability to execute the war plan. To achieve the information superiority that President Bush describes in *A Blueprint for New Beginnings—A Responsible Budget for America's Priorities*, we must pursue technologies that provide collaborative, interactive, real-time common operational understanding. This is best achieved by building a C⁴I architecture that embraces the principles of network-centric warfare while leveraging emerging space based capabilities and sensor to shooter technologies. We are also engaging Joint Forces Command to integrate ongoing C⁴I experimentation in our major peninsula exercises to help us stay on the forefront of emerging technology. We feel this relationship will put us in a solid position to integrate maturing technologies into our theater architecture.

Pursuing leading edge technologies alone will not guarantee success in the future. Transitioning to modern technology requires an accompanying shift from the current analog processes that served us well during the Cold War to the digital processes needed to address regional threats in the information age. To begin this transition, we need to balance current readiness with the imperative to pursue C⁴I capabilities that ensure full functionality. As such, the vast majority of our anticipated fiscal year 2002 budget for C⁴I supports the minimum required to sustain current "go-to-war" systems while we expect to pursue this new vision over the Future Years Defense Plan. This includes maintaining the funding previously earmarked for Korea support through U.S. Army Forces Command and Army Signal Command.

Our "go-to-war" command and control (C²) systems consist of the Global Command and Control System ((GCCS), both U.S.-only and combined versions), as well as a combined secure video teleconferencing (VTC) system. These combined systems are the Department of Defense's largest and most complex bilingual command and control systems and are absolutely imperative to commanding and controlling U.S. and South Korean forces. Over the last 5 years, U.S. Forces Korea has had to divert funds from other operations and maintenance programs to sustain these C² systems. We can no longer afford to take this approach. Our funding shortfall is significant, but contains only what is required to maintain the status quo. We have deferred new growth and operational enhancements to the outyears.

Any discussion of C⁴I must include two near term challenges—information assurance and spectrum availability. These capabilities are critical to protecting our investments in C⁴I. Our increasing use of information systems breeds a growing dependence. While this dependence does create opportunities for us to exploit adversary information and information systems, it does, however, expose our own vulnerabilities. We are pursuing a viable information assurance program to protect

our information while defending our information systems, but we anticipate facing a severe funding shortfall with regard to our top down driven projects. However, this could change as a result of the defense strategy review.

I share the same concerns as other CINCs regarding the upcoming plan to sell off major portions of the U.S. frequency spectrum. Today, we are hindered from fielding new systems as well as training as we will fight because of host nation spectrum access. We will soon be fielding the Apache Longbow attack helicopter in Korea but have not yet gained frequency approval for armistice training and operations due to conflicts with South Korean commercial telecommunications providers. Additionally, there are no available frequencies to support unmanned aerial vehicles during armistice, and only limited frequency approval for Joint STARS and Patriot air defense system. Further sell-off of additional spectrum in the U.S. will reverberate around the world and significantly impair on our ability to execute operations. I strongly urge great caution in this area.

Enhancement to our *intelligence capability* is an absolute necessity. President Bush's articulation of the need for "leap-ahead technologies for new . . . intelligence systems" (*A Blueprint for New Beginnings*. . .) hits the mark in Korea. Our top priority is to advance our intelligence backbone, the Pacific Command Automated Data Processing Server Site Korea (PASS-K) with 21st century technology. This is a General Defense Intelligence Budget Program (GDIP) that has operated with insufficient funding for over 5 years, and is now running on fumes. I fully support the Defense Intelligence Agency (DIA) requests for funding to expedite long neglected modernization, and acquire next-generation improvements. Failure to do so risks degrading our already diminished indications and warning posture while hampering our collaboration with the entire joint intelligence community. This must be funded!

We must improve our theater's intelligence systems' functionality. Our VSAT (Very Small Aperture Terminal) satellite network provides us mobile communications, but is currently separated into three isolated networks. We intend to integrate the three into one network, while modernizing and upgrading in the process. This will improve capacity and reduce costs while providing much needed redundancy in this fragile system. However, we have a funding shortfall in this program.

We need to leverage our capability to collaborate with the entire joint intelligence community off peninsula to perform rapid targeting, battle damage assessment, and threat analysis. We plan to install hardware and software onto the existing systems and networks to accomplish this essential requirement. This will facilitate the integration of U.S. Forces Korea collection efforts into national databases and threat assessments, seamlessly collaborating theater and national intelligence related to Korea. Without increasing our footprint in Korea, this will increase our accessibility to analysts at National Security Agency (NSA), DIA, and Joint Intelligence Center-Pacific Command. We need funding support for this effort.

Finally, intelligence, surveillance, and reconnaissance (ISR) assets must not dip below current levels in imagery intelligence and signals intelligence (SIGINT). . . it must improve. Until the unmanned aerial vehicle proves itself reliable and affordable as a replacement for the U2, we must hold the number of U2 pilots we have and not let this precious high-demand, low-density asset decrease on peninsula. I also fully support the U.S. national intelligence community, particularly National Security Agency, requests for funding to improve ISR and SIGINT capabilities.

Force Protection: The environment in Korea presents several unique challenges for the protection of our servicemembers, civilians, and family members. While our force protection posture continues to improve, United States Forces Korea has 95 installations across the peninsula, many quite small and remote. We have organized these 95 installations into 12 "enclaves" for more centralized planning, execution, and coordination of resources and to provide a clear chain of command responsibility.

During this past year, we have reviewed and updated the force protection plans for each of our enclaves. We are now taking the next step by exercising these plans, using likely terrorist scenarios, to continue to improve them. I have established a U.S. Forces Korea level "Tiger Team" to conduct an exercise at each of our enclaves during this fiscal year. Each exercise is preceded by a "Red Team" assessment, which simulates a terrorist group attempting to penetrate and attack one of our installations. We have conducted four of these exercises thus far. We have shared the lessons learned from each of these with the joint community and all of our units as we continue to refine our force protection plans.

We have identified four systemic force protection concerns within United States Forces Korea: *lack of standoff, access to installations, off-post housing, and off-post activities.*

Our most resource intensive vulnerability is *lack of standoff*. Urban encroachment on our installations, decaying infrastructure, and the lack of available real estate

for force protection modifications contribute to the vulnerabilities. In the short term we have used Joint Staff Combating Terrorism Initiative Funds to install blast walls and mylar coating in limited areas to protect our most critical facilities. Our Land Partnership Plan addresses some of our long-term weaknesses. This plan will shift many of our installations and training areas from urban centers to rural areas and allow us to move more of our people onto our installations.

Access to our installations poses another significant challenge. We have taken positive steps to improve our access control through implementation of a fingerprint scanning identification system and reducing the number of non-U.S. Forces Korea persons who can be sponsored onto our facilities. The Army currently fully funds our contract security guard force that maintains installation access control and perimeter security without diverting soldiers to this task. Continued funding is vital.

We are conducting a complete study of *off-post housing* and temporary lodging to assess our vulnerability and determine appropriate protection policies. Our long-term goal is to substantially reduce the number of personnel being housed off-post through increased construction of on-post quarters. In the near term we execute a very proactive force protection public awareness program for those living or traveling off post.

We have routinely conducted force protection assessments for all high profile *off-post activities and events*. We have expanded risk assessments to assess our vulnerabilities with regard to the lower profile activities such as inter-camp bus routes and personnel attending college classes on local campuses. We continue to look for and implement innovative ways to mitigate our vulnerabilities and educate our personnel and their families on threat avoidance. We believe force protection funding shortfalls will be significant for fiscal year 2002, and we need your help to ensure our American personnel are properly protected.

Future Force Development: As technology advances we must constantly seek innovative improvements to our capabilities through force development. We support the efforts of the research and development community, and would benefit most from improved *intelligence analysis capability*; ability to locate and track *weapons of mass destruction*; *protection against nuclear, biological, and chemical attack*; ability to *defeat hard and deeply buried targets*; and *missile defense*.

We are excited about the Army's transformation concepts and I am pushing for the stationing of one Interim Brigade Combat Team (IBCT) in Korea to replace one existing brigade. This will provide the maneuverability and combat power necessary to operate in the mountainous and increasing urbanized terrain of Korea. It will also prepare us to refocus the Army's forward deployed forces in Korea to a regional role. The IBCT provides a rapidly deployable ground force to complement Air Force Aerospace Expeditionary Forces, and Marine Expeditionary Forces, and Navy Amphibious Ready Groups and Carrier Battle Groups as U.S. Forces Korea's role transitions to that of northeast Asia regional security.

Quality of Life: Quality of life, our final command priority, is a basic element of overall readiness and is critical to our mission. As stated in President Bush's *A Blueprint for New Beginnings*. . . , "we cannot honor our servicemen and woman and yet allow substandard housing and inadequate compensation levels to endure." The Korean peninsula faces shortfalls in both areas. The investment philosophy of "50 years of presence in Korea . . . 1 year at a time" has taken a severe toll on our housing, infrastructure, and morale. Personnel tempo is 365 days a year in this "hardship tour" area. Our servicemembers wake each day within artillery range of our adversary knowing he will be the one who decides if we go to war. Our intent is to make a Korean tour the assignment of choice for our military personnel by providing the best quality of life possible. Our goal is a quality of life that is comparable to other overseas assignments. This is clearly not the case today. A Korea assignment today involves the greatest loss of pay in the military, the highest command declination rate, the highest "no show" rate in the U.S. Army, and the poorest quality of life of any permanent change of station assignment in the military. We have a plan but we need help. To attack these problems, we need to address *Pay and Morale, Housing and Infrastructure*, and *MILCON*.

Even with the great assistance we received from Congress last year, we continue to face grim conditions regarding *housing and infrastructure* throughout this command. Nearly 40 percent of the servicemembers in U.S. Forces Korea live in inadequate quarters. Overcrowded facilities force us to billet many unaccompanied personnel off-post, increasing their personal risk and cost of living. Unaccompanied housing and dining facilities suffer from rapid deterioration and excessive wear through overcrowding and lack of real property maintenance and repair (RPM) funding. Some military personnel still live in quonset huts and Vietnam-era pre-fabricated buildings. However, if funded, by 2008 the barracks will be upgraded to an acceptable standard. Fifteen percent of all buildings in the command are between

40 and 80 years old and 32 percent are classified as temporary buildings. In 1999 and 2000 alone, the command suffered 295 electrical power and 467 water supply outages from decaying infrastructure.

The lack of adequate family housing is the most serious quality of life issue we face in Korea. It contributes to high personnel turbulence and discontinuity, degrades morale and productivity, resulting in high assignment declinations and retention problems for our services. Indeed, Korea's uniqueness as a yearlong unaccompanied tour has been purchased at a price. We provide government owned and leased housing for 1,987 personnel—less than 10 percent of our married servicemembers—compared to more than 70 percent in Europe and Japan. Our goal is to increase the command-sponsored rate for Korea.

The solution is to raise the quality of life for personnel that serve in Korea, and we have a plan. This current plan includes new construction and leasing local housing units. We intend to apply more than half of this cost from our host nation construction funding to build 4,200 of the 6,300 units needed over the next 20 years, but we will need your help to fund family housing construction. In addition, we need leased housing (800 units authorized by Title 10 now, and add an additional 2,000 units to expand the command sponsored population). This year's "New Housing Project" budget includes 60 new units at Camp Humphreys. This project must not be cut. A total of 6,300 units across the peninsula are required.

Congressional funding that you provided last year has enabled us to improve water distribution systems at Kunsan and Osan Air Bases, and improve existing barracks at Camp Carroll, Camp Hovey, and Camp Page. Nevertheless, chronic under-funding of military construction (MILCON) funding for Korea during the past 15 years and the interruption of MILCON dollars for our command between 1991 and 1994 has limited our ability to give our servicemembers the quality of life they deserve. We desperately need to execute a comprehensive construction program and begin to eliminate the unacceptable living and working conditions in aging facilities that U.S. forces in Korea face every day.

Aging facilities are also more costly to maintain. Under funding of RPM exacerbates an already serious problem with troop housing, dining facilities, work areas, and infrastructure. We hope to receive additional funding that will allow us to keep the doors open to our facilities and make emergency repairs only. It will still leave us short of our total requirement.

Finally, utilities costs are soaring. This is an area where increasing costs can no longer be absorbed. Oil costs are up 60 percent. Electricity is up 5 percent and scheduled to go up 15 percent more. Because of these increased energy costs, we anticipate needing additional funds.

In summary, we work our command priorities through a balanced readiness approach—carefully addressing combat readiness, infrastructure, and quality of life with limited resources. Our ability to fight and win decisively is tied to proper balance in all of these essential areas. **Overall, our top priorities for fiscal year 2002 are as follows: (1) C-I architecture modernization and protection, (2) Combat readiness: air and ground battle simulation centers, (3) Anti-terrorism and force protection, (4) Environmental protection and damage mitigation, (5) Real property maintenance, and (6) Family housing.**

CONCLUSION

We would like to leave you with five thoughts:

First, we want to emphasize that the support of Congress and the American people is vitally important to our future in Korea. We thank you for all you have done. However, we must also ensure that our resolve is consistent and visible so that North Korea, or any other potential adversary, cannot misinterpret it. We have an investment of over 50 years in this region. I believe we should continue to build on it to guarantee the stability that is so important to the people of Korea, northeast Asia, and to our own national interests. We urge committee members to come to Korea and see first-hand the importance of the American military presence and the strength and vitality of the United States—Republic of Korea alliance.

Second, the North Korean military continues to increase its nonconventional threat and conduct large-scale training exercises in spite of severe economic problems and a perception of a thawing relationship between North and South Korea. North Korea's continued growth in military *capability* and the *intent* implied, amounts to a continued significant threat. Now, more than ever, the strength of the Republic of Korea—United States alliance, built on a foundation of teamwork and combined training, provides both nations with a powerful deterrent as well as the readiness to fight and win. Make no mistake; there is no

"peace dividend" yet in the Korean theater at this time. The North Korean threat to peace and stability in northeast Asia will not fundamentally diminish until the North engages in tangible military confidence building measures, both now and in the future, that are *verifiable* and *reciprocal*.

Third, this is the second year of commemorations recognizing the significance of the 50th anniversary of the Korean War, viewed by many of our veterans as the "forgotten war." We are committed to honoring the brave veterans living and dead and hope you can join us in Korea for these commemorations to remember their sacrifice.

Fourth, now and in the future, the U.S. and northeast Asian nations cannot secure their interests and economic prosperity without credible, rapidly-deployable, air/land/sea forces in Korea. Presence is security, commitment to friends, and access into the region. As the only presence on the mainland of east Asia, U.S. forces in Korea will play a vital role in the future peace and stability of the region.

Finally, you can be justifiably proud of all the exceptional things the soldiers, sailors, airmen, marines, and Defense Department civilians continue to do with great spirit and conviction. They remain our most valuable asset. They sacrifice for our Nation every day. This is why we remain so firm that we owe all those who faithfully serve proper resources for training, a quality infrastructure, and an adequate quality of life. Again, thank you for this opportunity to share our thoughts with you.

Chairman WARNER. Thank you.

We will have a 6-minute round of questioning for each member.

I am going to lead right off, General Schwartz. During the course of President Bush's campaign, he addressed the serious problems associated with retention of our middle grade officer corps and senior enlisted. One of the root problems was over-deployment. While you speak with great pride as to the number of times that you and your subordinates have served in Korea, nonetheless, President Bush and Secretary Rumsfeld and the team have to look to determine whether or not there are areas of the world in which we can reduce the U.S. presence which, in turn, hopefully will reduce the number of deployments. In our judgment—at least mine—the last administration was over-deployed with our Armed Forces and underfunded.

Now, is your AOR one in which the Bush team can look at and determine, based on your recommendations, that there is a basis for a reduction of the total number of personnel which, in turn, would reflect Army-wide fewer deployments?

General SCHWARTZ. I think my answer to that, Senator Warner, would be this. With the current situation like it is, with the threat as we see it, with the words that I used, "bigger, better, closer, deadlier," I would not recommend any cut or reduction of force in the Korean peninsula at this time. If, however, in the future we go down the path of reconciliation, if we go down the path of confidence-building measures that are verifiable and reciprocal, and we see that the north takes the actions—not the words, as you indicated in your opening statement, but the actions—to reduce the tension and to reduce the threat, then there could be a concomitant reduction of troops. But until we reach that period of time, I would not recommend to do so.

Chairman WARNER. You were present before this committee last year and have rejoined us this year. Is your AOR in your judgment subject to greater tensions and threat or about the same as last year?

General SCHWARTZ. Sir, I have to tell you the threat has gotten identifiably better in those areas that I talked about, and I can be

more specific in a closed session. But the threat is better than we saw it last year. They are training at a higher level.

Chairman WARNER. When you say it is better, in other words, it places a more serious threat to our forces and those of South Korea.

General SCHWARTZ. Right, sir. I think the threat is more serious today than it was last year when I testified.

Chairman WARNER. Let us start off with your AOR, Admiral Blair. What about the threat condition last year when you appeared before this committee versus this year?

Admiral BLAIR. Sir, the concerns that you have about the strain on our people of operations I think are more true of other theaters than of the Pacific Command. I would, in fact, point to the East Timor operation as an operation in which we were able to come up with some very creative ways of working within an international coalition in order not to have large deployments of U.S. forces.

Right now we have 12 on-the-ground personnel in Dili, East Timor. That is down from about 500 last year. The rest of our presence is visits by Navy ships and often embarked Marine units. For instance, we have the Boxer Amphibious Ready Group with its embarked Marine Expeditionary Unit making a visit during its regularly scheduled deployment.

So, we are taking advantage of the deployment capability we have within the force to get the job done. All of our ships are within their personnel tempo (PERSTEMPO) limits, and the same is basically true for the other services.

Chairman WARNER. Do you feel that within your AOR there could be some reduction in deployments, thereby reflecting on lessening the overall stress in the Navy on deployments and hopefully improving retention?

Admiral BLAIR. I do not think the PERSTEMPO is a factor in retention in the Pacific theater. I think we are in good balance, sir.

Chairman WARNER. Returning again to the work that you perform—and it is a very valuable contribution to this most difficult decision that is facing our President with regard to how to structure this year's arms package for Taiwan—did you have consultations with our allies and friends, other nations in this region, and are their thoughts factored in? Because if we had the misfortune of an outbreak of hostilities requiring the presence or enhancement of U.S. forces to, hopefully, either stabilize or prevent it or, indeed, confront this problem, it would impact the entire region. Therefore, I think consultation with our allies should be a factor to be taken into consideration as we structure this package. All I need to know is procedurally, have you and your subordinates done that?

Admiral BLAIR. We did not have specific discussions on the particular Taiwanese request this year. It is something that we discuss in general terms with allies, but there is not a procedure for a specific consultation with them.

We do have specific consultations with the Taiwanese delegation itself. It comes to Washington to present the requests, along with rationale, and then it visits my headquarters in an unofficial capacity also to discuss it.

Chairman WARNER. As you look at the relations between China and Taiwan and compare those relationships today with 1 year ago, do you believe the tensions are about the same or higher?

Admiral BLAIR. About the same, sir.

Chairman WARNER. Now, as you look at the military situation with a trend in China of putting in place specific installations, missiles foremost, they are predicated presumably solely for the balance of military power between China and Taiwan. Given that I think I understood you to say that that trend is increasing on behalf of China and therefore places upon Taiwan the need to enhance its own defenses, will the arms packages now being constructed in your judgment result in a balancing of this trend brought about by the initiatives in China?

Admiral BLAIR. My recommendation is to take the actions necessary to maintain that balance, and I believe that balance is well attainable under current conditions. There have been improvements in the People's Liberation Army (PLA), as I said. It is a mixed picture as far as the advanced weaponry goes. There have also been improvements in the Taiwanese Armed Forces as they also bring new systems on line. So, what you are talking about is the balance here, and that is the way my staff, my components, and I evaluate it.

Chairman WARNER. But in simple language, given the trend of increases you see on the behalf of China in its defense, increased spending, and the placement of missiles, that balance will no longer be present unless there is an enhancement of the arms package to Taiwan. Is that correct?

Admiral BLAIR. There has to be an enhancement of Taiwan's capability through a combination of what they buy from us, what they manufacture from us, and what they buy from others.

Chairman WARNER. To bring that back in balance again.

Admiral BLAIR. To maintain the balance.

Chairman WARNER. Thank you.

Senator Levin.

Senator LEVIN. General Pace, one of the conclusions that Senators Reed, Ben Nelson, Bill Nelson, and I reached following our visit to Colombia was that—and here I am quoting—"the continued strengthening, modernization, and professionalization of the Colombian military is the best hope for weakening the narco-traffickers' strangle-hold on Colombian society, advancing the rule of law to protect the rights of all Colombians, and ending the massive violations of human rights in Colombia." Would you agree with that?

General PACE. Sir, I agree with that 100 percent.

Senator LEVIN. Could you tell us, General, about your views as to how serious you believe the Colombian army leadership is to end the cooperation between the Colombian army units in the field and the paramilitaries?

General PACE. Senator, thank you.

I am convinced that the senior leadership is dedicated to do that. I have been to Colombia seven times, sir. I have had the pleasure of meeting, on various occasions, with President Pastrana; on almost every occasion, Minister of Defense Ramirez; and on every occasion, General Tapias, who is their chairman, and the service

chiefs of the Army, Navy, and Air Force. We have had discussions. We have visited field units. We have talked both about human rights violations and about collusion with the paramilitary.

The Army of Colombia initially attacked the problem that they had with human rights. They have embedded in their training program human rights training. As an example of the success they have had there, 2 years ago about 60 percent of the accusations of human rights abuse inside Colombia were against the Colombian military. This past year, just under 2 percent of all accusations of human rights abuse was against the Colombian military. The Colombian military's standing within the public has raised from number 10 in public opinion polls to number 1. So, the Colombian military has, in fact, taken on the human rights responsibilities that they have with vigor.

They have now turned that same focus onto collusion with the paramilitary.

Senator LEVIN. In an attempt to end it.

General PACE. Correct, sir. The leadership understands that it has been going on. They understand that it is unacceptable. They have undertaken to train their units in that regard, and in fact they have specifically said that they view the paramilitaries and, in their words, the "illegal self-defense forces," to be the largest long-term threat to the survival of their democracy. Colombia uses the term illegal self-defense forces, because they think the use of paramilitary gives the organizations too much credibility.

Senator LEVIN. Thank you.

Admiral Blair, on the question of Chinese military spending, I understand there has been about a 17 percent hike in military spending in China. But most experts have previously concluded that China put economic development above military modernization. I am wondering whether in your view the hike in military spending means that the Chinese leadership has changed its priorities.

Admiral BLAIR. No, Senator, I do not believe it does. It is interesting. The Chinese proudly announced a 17.7 percent increase, and when I asked 17.7 percent of what, the answers got a little vague. Chinese military budget accounting is evolving, to put it charitably, opaque to put it more realistically. There are various items off budget, and clearly the claims that they make of an overall spending of on the order of less than \$20 billion just does not make any sense.

That being said, I do not believe that the fundamental priorities of the Chinese Government have changed. The Chinese officers that I talked to clearly feel underfunded. They feel that they are not being given the resources that they need, and the government leaders, according to the most careful estimates that I have, are keeping them underfunded.

Senator LEVIN. Thank you.

Admiral, this goes to both you and General Schwartz. It has to do with the Perry recommendations, the two-track policy approach that he recommended relative to North Korea. I understand that he worked carefully with your command, General Schwartz, and I believe also with the Pacific Command before those recommendations were made. It is my understanding that his recommendations

had the full support of both commands. Is that correct? I could ask either or both of you.

Admiral BLAIR. I can start because I was there, Senator Levin, when Secretary Perry was doing his study. The fundamental pieces of what he recommended, that we must maintain the deterrent capability, that we must consult closely with both Japan and Korea, and that we should pursue a policy of offering Korea a balanced set of incentives to stop the behavior that was dangerous to its neighbors and to us in return for relief with their diplomatic and economic isolation was certainly something that we supported.

General SCHWARTZ. I think I add, sir, that the Perry process was a comprehensive review, and it went across the Agreed Framework of the missile moratorium. Certainly from what I hear from the administration right now that same comprehensive review is taking place, looking at everything that is in place and reviewing what we had done in the past and trying to make recommendations to move forward. So, I think it is a starting point certainly for all of us. As I testified last year, I think the Perry process took us a long way towards where we find ourselves on the peninsula at this time in terms of negotiation and even the summit that we have had and some of the historic things that have taken place in the last year.

Senator LEVIN. Did he work carefully with your command before making those recommendations?

General SCHWARTZ. Sir, he did. In fact, I was almost flabbergasted at the amount of time that he spent on the peninsula talking to us and working with us in developing his recommendations.

Senator LEVIN. Did the recommendations have the support of your command?

General SCHWARTZ. Yes, sir, they did.

Senator LEVIN. On the question of the Framework Agreement, it has kept North Korea from producing enough plutonium for dozens of nuclear weapons. Are we better off militarily if North Korea does not have those additional weapons, does not produce that additional plutonium? Does that leave us better off?

General SCHWARTZ. Sir, I do not think there is any doubt about it. If they are not producing fissile material, they are not then able to produce the nuclear weapons that we are so concerned about. So, when we have an agreement like the Agreed Framework and it freezes that capability, at least at two locations, like it has, that is beneficial. There is no doubt.

Senator LEVIN. Just a quick brief answer, if I can, from each of you. As the CINCs, can you tell us whether or not you are participating in the strategy review that is going on now in the Defense Department? Can you just tell us if you have an active role now in that strategy review?

General SCHWARTZ. Sir, I will give you an example for Korea. Ambassador Hubbard is there right now with a team that is the policy formulation team for this current administration. It's on the peninsula for the next 3 or 4 days, briefing some draft recommendations, getting feedback from us, as well as the Koreans, then moving on to Japan. So, that process is active and taking place on the peninsula.

Senator LEVIN. Admiral, are you actively involved in that review?

Admiral BLAIR. Are you talking about the review of North Korean policy?

Senator LEVIN. No, generally.

Admiral BLAIR. The overall strategy review. Yes, sir, I am involved in the overall strategy review.

Senator LEVIN. Thank you.

General PACE. Sir, Secretary Rumsfeld gave me a draft last night and asked me to be prepared to discuss it with him tonight.

Senator LEVIN. Great. Thanks.

Chairman WARNER. Senator Inhofe.

Senator INHOFE. Thank you, Mr. Chairman.

General Schwartz, you used in your opening statement the term "well-trained, fit-to-fight." I have visited you in different incarnations that you have had, and one thing I have noticed is you are able to get fitness programs squeezed out of nothing. Are you satisfied with your quality of life and your fitness program there?

General SCHWARTZ. Sir, I am not, to be honest with you. I am looking hard at the fitness programs. I am looking hard at the quality of life, and I am trying to articulate some of our needs. I have done so in my formal statement, and I am doing so as I make visits around to Congress and the Senators. So, I am trying to articulate a better effort in that regard.

We are trained and ready, but when we look at the infrastructure and we look at the quality of life aspects of Korea, 50 years, 1 year at a time, there is a lot of work that needs to be done to get that theater and that peninsula up to speed.

Senator INHOFE. When you talk about when you look up north the threat that is up there, I know that right now they are reviewing a lot of this new equipment that we are talking about, such as the Crusader, but do you see a real need for a high rate of fire artillery piece in terms of reducing the threat that you are facing?

General SCHWARTZ. Senator Inhofe, I do. One of the imbalances we have on the peninsula is artillery. The capability of the North Koreans—they have the world's largest stockpile of multiple rocket launchers. They have the world's largest artillery force for such a small nation. I am very concerned about that capability, and anything we can do in the south to offset that to bring that into balance with respect to the Crusader or any other artillery systems, I would be in favor of.

Senator INHOFE. Yes, because we are right now deficient compared to them in the rapid fire realm.

General Pace, this is not consistent with what we are supposed to be asking at this hearing, but because of something else that is going on right now and because of the Pace-Fallon report that you were involved in, I would just like to ask you the question. As far as Vieques is concerned, I made an effort to see all of the possible alternative sites and came back satisfied that there is none.

But just recently the two sites in Nevis came up. Since they were not on my list to go see, I would like to ask if you remember why they were or were not alternatives for this type of integrated training.

General PACE. Sir, Admiral Fallon and I looked at that early on in our deliberations for the report we provided. It did not make the

final cut because it lies in the path of a very heavily trafficked civil aircraft area.

Senator INHOFE. So, neither one of those made your list to examine.

General PACE. That is correct.

Senator INHOFE. Admiral Blair, when Senator Warner talked about how you would assess the threat today relative to 5 years ago, you thought for a while and said, about the same. I think your answer is probably accurate, but it is very serious. It was 5 years ago, as I recall, when China was putting on its show there in the Taiwan Straits. I think at that time it was to influence the elections. That is when one of the high officials said we are not concerned about America intervening because they would rather defend Los Angeles than Taipei.

Then more recently, when they made the statement that war with America is inevitable—now, these are things that have been happening over the last 5 years.

Then just a few months ago, when you met privately with some of the Chinese generals in Beijing and informed them that the United States stands ready to defend Taiwan in the event of Chinese attack, according to one official, he dismissed your statement as a laughable bluster.

Now, in light of the buildup that is going on there, we talked about the budget. We have not talked about the fact that they are buying an unknown number of SU-27s, SU-30s, things that are as good or better than those things that we have right now. Even though you assess the threat the same today, I did not want that answer to imply that, for some reason, it is not that serious.

Admiral BLAIR. Sir, no, I was answering the question about there is a relative threat today.

I read that same newspaper article, and I do not know what the hell they were talking about. When I talk to Chinese officials and tell them that we can take care of our responsibilities there, they do not dismiss it one bit. In fact, quite the contrary.

Senator INHOFE. In your opening statement, you talked about readiness and some of your problems. In terms of readiness, I would like to ask both of the Generals to respond in the same way. What is the nature of your readiness problems for the RPM accounts, quality of life, which I always consider to be a readiness issue, not a personnel issue, force structure? What are your readiness problems, General Pace and then General Schwartz?

General PACE. Sir, in my area of responsibility, I have very few troops actually assigned to me. I get all troops deployed to me from the Joint Forces Command under the authority of the Secretary. So, I am very fortunate in that the troops who come to work in the SOUTHCOM AOR are, in fact, fully trained and ready to perform.

Senator INHOFE. You do not have the problem.

General PACE. So, I do not have readiness problems. That is right, sir.

Senator INHOFE. General Schwartz.

General SCHWARTZ. I think I would comment on it just to reinforce a couple that I started my opening statement with. Some of the readiness concerns that I have, of course, are in the C⁴I area, command and control and the protection of our command and con-

trol facilities in terms of hardening and in terms of the fiber optics we need. I would say that was number one.

The upgrading of our battle simulation center so we can have the robust exercises that we have, and the sustainment of dollars to conduct those exercises is very important to us.

The force protection effort, as I indicated, is tremendously important because we found ourselves all over that peninsula and we find ourselves in a situation now where we have not been able to take the force protection measures that we are confident that we need to take for the future. So, we will need some dollars to fix some of that.

Then, of course, I would just maybe end with this, the RPM, the real property maintenance account. We have a tremendous need for dollars to fix some of the things that are 30- and 40-years-old that we just have not been able to fix. Those dollars are in the millions, and we just need to get our hands around that and some money to fix some of the things.

Senator INHOFE. By the very nature of an RPM account, that is something that should be done immediately. Yet, you do have a great need there, just as the other CINCs do that we have talked to. That seems to be consistent.

General SCHWARTZ. Yes, sir. There is no doubt.

Senator INHOFE. Thank you very much.

General PACE. Senator, if I may, I answered your question based on the troops and equipment that deploys to my AOR. To be more complete in my answer, I can give you a very thorough answer about ISR in the closed session.

Senator INHOFE. Very good. Thank you.

Chairman WARNER. Thank you very much, Senator.

Senator DAYTON.

Senator DAYTON. Thank you, Mr. Chairman.

General Schwartz, I noticed that you are originally from St. Paul, Minnesota, and your distinguished service greatly enhances your native State. So, thank you.

General SCHWARTZ. Thank you very much.

Senator DAYTON. You spoke briefly and you mentioned that you had discussed this at greater length with the Chairman about the treatment of our service men and women who are deployed, as well as their families who are left behind. I had the very sad duty last week to go to Fort Bragg to attend the memorial service for an Army Ranger, Sergeant Troy Westburg from Minnesota, who was deployed to Kuwait, his first overseas tour of service, and 1 month later was returned home to his family with the loss of his life. So, it underscored to me the sacrifices that these men and women are prepared to make and are sometimes called upon to make are very real. For their families, the separation over that period of time at best is a hardship and at worst is a lifelong tragedy.

So, I wonder if you could elaborate on your brief comment about how the rations and other ways in which these families are subjected to what you would consider unfair, undue hardship financially and otherwise and what can we do, what should we do to remediate that?

General SCHWARTZ. Thank you very much, sir. I appreciate the opportunity to comment on that.

The separation is tough. It is long. It is hard. When you look into the eyes of these great people, you can see the hurt. There is a hurt there. They serve and they are willing to do that. That is what they signed up for. There is tremendous opportunity on that peninsula for them to train and do the things that they love. So, there is a hurt but there is also a love of what they do.

But if you just look on the hurt side and the quality of life side, we need to improve the barracks situation over there. We need to improve the quality of life over there in terms of the facilities that we have, dining facilities and gyms. So, we need to pick up on that.

But when you get into the individual soldier, sailor, airman, and marine, I think there are a couple of things we can do. We can look at this whole issue of separate rations, which I commented on, because when they deploy to that theater and they leave that family and that spouse behind, that is a big hurt. That is about a \$4,000 a year hurt that she or he has when they are deployed away from home for a year. So, we need to take a hard look at that and see if we are doing the right thing there and see if we can provide the means to give it back to them, or at least not take it away.

The second thing is—and I have talked several times about this—we ought to look seriously about a tax exclusion for these folks because when they are deployed in other areas of the world, when they are deployed to the Balkans, when they are deployed to Kuwait, we give these great soldiers, sailors, airmen, and marines a tax exclusion. It is a tremendous boost in morale. It is a tremendous vote of confidence for their sacrifice when they are deployed away from home. It helps that family back home. It helps that soldier say, this is not hurting me as much when I am gone for a year, and it kind of covers some of those hidden expenses.

I have been doing some surveys about those hidden expenses, and they are anywhere from \$4,000 to \$6,000 out of each servicemember's pocket per year. Plus the separate rations hurt. When you add that all together, you are starting to talk about \$10,000 to \$12,000 that a servicemember has to pay to serve away from home. So, there are some things that we need to do and take a hard look at to try to help them when they are repetitively going back to a theater like Korea.

Senator DAYTON. Thank you, sir.

If you have any specifics on that, being a freshman member of this committee, you can help educate me and also additional remedies. I would appreciate if you would send those to me. Thank you.

General SCHWARTZ. Thank you, sir. We will do. I will follow up on that.

Senator DAYTON. Thank you very much.

General Pace, you mentioned Colombia. We have had a couple of briefings on that, including a meeting with the Defense Minister of Colombia. Some of the comments that he made struck a note in my memory bank. He referred to the light at the end of the tunnel in the situation there. Your testimony, sir, refers to the increased paramilitary activity, kidnappings, and the like which seems, given our involvement in what some might view as the domestic affairs of that country, would be almost a natural follow-on to what we are doing.

I understand that these policies are made by civilian authorities, but from a military standpoint, how do you view realistically the situation there?

As a corollary to that, I appreciate that in your prepared remarks you referred to this illicit drug industry as a growing threat to the United States homeland which corroborates in my own view that one of, if not the greatest, threat to our national security is this flow of illicit drugs into this country and the devastating effect it is having on our cities, our youth, and the like.

What, if anything, from a military standpoint could we do to increase the interdiction of these narcotics coming into this country to make the transport of them something that would be seen as so life-threatening that we would have a greater deterrence on those who are trafficking, it seems often without impunity?

General PACE. Senator, thank you very much. I will try to give you the Reader's Digest version of the answer to both those very important questions.

With regard to the situation, sir, President Pastrana's *Plan Colombia*, which we are supporting through the bipartisan support of our Congress, has 10 very distinct parts, one of which is the military piece. The other nine are such things as revamping the judiciary, improving the schools, improving the health, building roads, alternative crop development, and all the kinds of things that will actually be the make or break part of the plan and will determine whether or not it is successful in the future. But to get there, the military and police are providing a secure environment, which allows the other nine parts to take place and is very important.

Today, the combined capabilities of the Colombian military and Colombian police is not sufficient to provide security for the entire country. They can, in fact, do set-piece battles and win. They can go to a particular part of the country, take control of it, and sustain that control, but they are not large enough to be able to provide security for the entire country.

As a result of that, the military support that we are providing in the form of assisting them to train their counternarcotics brigade and assisting them through our State Department to obtain helicopters and to marry up the helicopters with the counternarcotics brigade is, in fact, helping them very much.

The plan by President Pastrana to increase the size of his military by 10,000 a year, each year for the next several years will, in fact, go a long way toward allowing him to have the size force and the professional size force to be able to provide the security he needs.

So, from my perspective, the plan as laid out, if aggressively pursued, can in fact reach the goal for which it is intended, sir.

To your second question, sir, as far as threat to the homeland, sir, I consider drugs to be a weapon of mass destruction. It is a threat to our homeland. If I had \$1 to spend, I would spend it on demand reduction. The second place I would spend money is in the source zone we are helping right now, and the third place I would spend money would be in the transit zone. The reason I put it in that priority is that is where I believe our efforts will provide the most success in the long term. It is very difficult, once it is produced and it begins its transit to the United States, through the

eastern Pacific, up through Central America, through the Caribbean, up through the islands, to chase those arrows once they have left the bow to try to catch them in flight or determine where they are going to land.

Senator DAYTON. Thank you. Thank you, Mr. Chairman.

Chairman WARNER. Thank you very much, Senator.

We will now hear from Senator Smith.

Senator SMITH. Thank you, Mr. Chairman.

Admiral Blair, I was reading excerpts of some remarks you made recently in a speech regarding the concept of security communities. Some of what you say makes sense. A couple of things concern me. Let me just briefly pull out a couple of lines and then ask for your comment.

The prevalent way of thinking about international relations throughout Asia and the Pacific is in balance of power.

You go on to say that is the world of Bismarck in 19th century Europe. An alternative approach, offering the prospect of a brighter future in Asia and better suited to the concerns of the 21st century is one in which states cooperate in areas of shared interest, such as peaceful development, diplomacy promotion, and the use of negotiation. In essence, it would be preferable to promote security communities as opposed to the old balance of power.

Then you go on to say the problem is not force structure. It's zero sum balance of power mindsets and ambiguous intentions, fueled by ethnic and religious zeal, et cetera.

Then you say here part of the answer lies in developing regional, multilateral approaches to common security challenges. The most effective method is to develop policy coordination, including combined military cooperation, on a particular regional security military issue or a series of related security issues.

I understand where you are coming from in terms of trying to relax tensions and work together in a community sense, a security community. But combined military cooperation, if you were to move that to a region such as the Taiwan Straits and try to come up with a common security community, how would you do that in such a region as that?

My understanding of the military cooperation with China is it is a one-way street. We give and they give nothing. So, I am very concerned about that particular statement as to how it may apply to China in your region of AOR.

Admiral BLAIR. Sir, I think in our relationship with China, we have areas in which our interests coincide and we have areas in which we are at odds. Clearly, Taiwan is the area where we are most at odds because they reserve the right to use force and we reserve the right for them not to use force.

On the other hand, there are many areas in which the interests of the two countries run parallel: resolving the Korean Peninsula situation peacefully without conflict, ensuring that southeast Asia is a region which is secure and developing peacefully, the flow of oil from the Persian Gulf, on which China is becoming dependent, and many other allies of the United States of that region are dependent on, transnational issues such as narcotics. General Pace was talking about narcotics coming up from Colombia. There is also a flow from the Golden Triangle through southern China out to all

countries in the region. It is affecting China. It is affecting other countries in southeast Asia. Part of it comes to the United States. Terrorism, which is a threat to both of our countries.

In addition, virtually all of those areas that I have talked about are areas that are not just in China's and the United States' interest. They are in the interest of the other countries in the region. North Korea is the interest of all of the countries in the region. Transnational issues are in the interest of all. Southeast Asian stability is in the interest of all.

So, I believe that in those areas, the United States, China, and other countries can cooperate, including military cooperation on things like peacekeeping, disaster relief, basically the non-warfighting military cooperative areas. I think we can develop areas in which we can productively work together and stand a better chance of isolating the holdovers from past conflicts, such as the Korean standoff, such as the Taiwan Strait standoff. So, I think it offers a way for China to develop constructively and for the United States and other countries to make that same approach.

Senator SMITH. Did you make any recommendations to Secretary Rumsfeld on Taiwan arms sales?

Admiral BLAIR. I did.

Senator SMITH. I assume you choose to keep those private at this point.

Admiral BLAIR. I would rather let the decision process play out, sir.

Senator SMITH. All right.

Again, in the Taiwan Straits and looking at any possibility of what you call a security community, we have reports, at least from Taiwanese newspapers, about the Chinese using the Russian-made Sunburn missile in the region. The most significant purpose of that missile is to take out an aircraft carrier, to "kill it" is the exact term that they use. That sends to me a pretty clear message from the Chinese that they are intent on countering the U.S. Seventh Fleet's presence in the Taiwan Straits. With all due respect, I do not see how there can be shared or combined military cooperation with a country that is basically threatening our entire Seventh Fleet carrier force out there.

What are we doing now to be able to protect our forces from any possible attack from a Sunburn missile, especially the several thousand men and women who would be on an aircraft carrier? What countermeasures are we taking to that missile being introduced into the region?

Admiral BLAIR. The Seventh Fleet, in conjunction with the other forces that I can bring to bear, can ensure that China would not be successful in aggression against Taiwan should the decision be made to commit our forces. So, when you look at the whole picture, China right now cannot be successful in aggressing and, therefore, coercing Taiwan. That is the job that we have.

As I mentioned, I think we should not have Taiwan define the entire U.S.-Chinese relationship. It should not define the entire military relationship. It certainly should not define the entire national relationship, which includes economic cooperation and all of the changes that information technology and generational change are bringing to China. So, I do not think that a military confronta-

tion between the United States and China is inevitable, and I believe that we should pursue policies which makes it less likely rather than more likely.

Senator SMITH. My time is expired. If you want to say it in closed session fine, but I just want to ask, are our carriers in the Seventh Fleet in the Taiwan Straits threatened by Sunburn missiles?

Admiral BLAIR. The carriers in the Taiwan Strait can carry out their jobs, Sunburn missiles or no Sunburn missiles.

Senator SMITH. Thank you.

Chairman WARNER. Thank you very much, Senator Smith.

Senator Kennedy.

Senator KENNEDY. Thank you.

General Pace, the U.S. Ambassador to Colombia, Ann Patterson, has indicated that spray planes in Colombia were shot at 122 times last year and American civilians are involved in flying those planes. Her assessment is that Americans are at risk in Colombia and that we will have Americans shot down.

What is your view about the risk that Americans have in Colombia? Is it inevitable that Americans will be shot down?

General PACE. Senator, thank you.

The American civilians who are flying those aircraft are hired by our State Department to fly those airplanes. They are U.S. contractors who are flying the airplanes. They have, in fact, had at least 128 hits in the last year on these small airplanes that they fly. They continue to fly into the more difficult areas to reach. Where they have been spraying so far is in the flat areas. As they get into the more mountainous terrain where the folks on the ground can shoot at them not only straight up but from the sides, the environment in which they fly becomes more and more dangerous. It would not surprise me that over time that one of those aircraft will be shot down.

Senator KENNEDY. Well, if that happens, what are the procedures for search and rescue operations? Who is responsible for the Americans' safety?

General PACE. Sir, those aircraft are flying in support of and as part of the Colombian National Police effort. The Colombian National Police have the search and rescue responsibilities. The helicopters that they use currently are manned both by Colombian pilots and by U.S. civilian contract pilots.

Senator KENNEDY. So, our military would not be involved in any of the search and rescues?

General PACE. That is correct, sir.

Senator KENNEDY. Are the American civilians who are involved in flying these spray planes armed?

General PACE. I do not know, sir. I can find out.

[The information referred to follows:]

[Deleted.] I defer to DOS for further information on this policy.

Senator KENNEDY. On the issue of collusion between the Colombian Armed Forces and the paramilitary, it is widely recognized that collusion between the two groups exists at the grassroots level, notwithstanding the efforts at the higher levels to address the problem. The State Department Human Rights Report states that in 2000 members of the security forces collaborated with the para-

military groups that committed abuses, in some cases allowing such groups to pass through roadblocks, sharing information, or providing them with supplies and ammunition.

Who is the highest ranking U.S. military person who has conveyed concerns about the links to the Colombian Government?

General PACE. Sir, the highest ranking U.S. military officer who has conveyed that concern is me.

Senator KENNEDY. I know you made a brief reference earlier to Senator Levin. I know you have been there seven times, and I appreciate your earlier responses. Could you give us some idea about what the response was and what your own reaction is to it?

General PACE. Sir, thank you.

Sir, the response from President Pastrana, who broached the subject with me, Minister Ramirez, who broached the subject with me, General Tapias and all of his service commanders, who briefed me on it first, have all been of great concern. They recognize that they do have, at the lower levels, collusion with what we call the paramilitaries. They are determined to stamp out that collusion.

As one indicator, I have been invited next week by General Tapias to go to sit down and debrief his senior staff, his service chiefs, and their senior staffs on my testimony in front of these committees so that they can better understand what issues are of importance to the United States Congress. Obviously, two of the issues I will talk to them about and debrief them on are human rights and collusion. So, they are very dedicated, sir, from the president on down, to stamping this out, just as in the past they focused on human rights violations and their record has improved dramatically.

Senator KENNEDY. Let me ask you this before I come to the human rights. Have the American military personnel on the ground in Colombia seen evidence of this collusion?

General PACE. No, sir. We operate solely inside the training bases. We do not go out on operations, sir.

Chairman WARNER. Senator Kennedy, could I interrupt just a minute? I have to absent myself to go up and introduce the new nominee for the General Counsel of the Department of State, a former Deputy Secretary of Defense. So, I will be back in just a few minutes.

If you, Senator Sessions, would take the chair.

Senator KENNEDY. On the issues of human rights, I have appreciated the percentages and the population. As one who was around during the pacification in Vietnam, I remember we used to have a checklist too. A hamlet was pacified if they had a well. They had 10 different things. If they had a well, they had a school, they had employment, they had housing, they had the other, it was pacified. So, it took us a long time to realize that we ought to look at what has happened in the inflation of rice that is coming into that hamlet in terms of understanding of what was really happening in that area or region. We became much more sophisticated in terms of the evaluation. I am sure you will want to do that as well.

When we talk about the human rights, I am sure you will want to know the kinds of charges that were made, what level of human rights charges were made, what has been dropped, or what has not been dropped on this. They have gone from the percentages. I

would like to know who is doing the polls. We have all been through polls. I am sure you have your own intelligence people who are looking at it. I am sure you are appropriately skeptical, as you would be, in trying to make any judgment on any policy sort of question.

My time is up. If you have any reaction to that.

But then if I could, Mr. Chairman, ask if SOUTHCOM is preparing a report on Colombia's paramilitary groups and their links with drug traffickers. I would like to see if SOUTHCOM could do one for the committee, if that is possible. I suppose that request order for the committee ought to come through the chair, but I will ask that and I will talk to the chair and the ranking member.

General PACE. Sir, we can do that.

[The information referred to follows:]

Colombia has the most complex human rights environment in the Area of Responsibility (AOR) due to the symbiotic relationship between drug trafficking organizations (DTOs) and several illegal armed groups. We continue to see allegations that members of the Colombian Military (COLMIL) and National Police (CNP) maintain covert links to illegal self-defense forces, despite strong government and legal pressure to discontinue these ties.

Illegal self-defense forces and insurgent groups are Colombia's worst human rights offenders. [Deleted.]

In a concerted effort to improve its human rights record, the Colombian government has implemented the most aggressive human rights program in the hemisphere. Along these lines, the government and, in particular, the COLMIL, have made significant progress. During the 1980s and early 1990s, about 60 percent of all reported accusations of human rights abuses were made against the security forces. In 2000, the number of accusations attributed to the security forces amounted to less than 2 percent, marking the fifth consecutive year in which accusations of human rights violations against the military have declined. This progress is a direct result of the effort made by Colombia's military leadership to change the culture of their institution. Specific measures have included educating their military on human rights standards, establishing a staff judge advocate corps, developing rules of engagement for the troops, and increasing the military's cooperation with civilian investigative and prosecutorial agencies.

Civilian and military investigators pursue officers and soldiers accused of collusion. The military penal code that went into effect in August 2000 took human rights investigations out of the hands of field commanders and created a cadre of military prosecutors. The Colombian government has given civilian courts jurisdiction in cases not involving official duties. Punishments for security force members found guilty of collusion with illegal self-defense forces have ranged from administrative discipline to prison sentences.

The COLMIL has declared a "no tolerance" policy against collusion by military members with self-defense forces and has successfully sought to condemn members linked to these groups and human rights violations. Reliable evidence on collaboration is limited, making it difficult to assess confidently the degree of collaboration within the COLMIL.

USSOUTHCOM uses all source information to poll human rights abuses in Colombia: [Deleted.]

General PACE. My human rights information, sir, came from Ambassador Patterson and her country team. I am parroting information I received in country from the U.S. embassy.

Senator KENNEDY. I would just say that in your own evaluation to know the types of charges, what the allegations are, and how they are being dismissed, what officers, if they are officers, or non-commissioned people, to give a complete picture I think is going to be called for as well.

But I thank you very much for your testimony. Thank you, Mr. Chairman, and I thank the Senator from Louisiana.

Senator SESSIONS [presiding]. General Schwartz, I think it is my time to ask a few questions.

With regard to Korea and the assignment of your fine soldiers there and the detriment and losses they incur in terms of income and their families—Senator Dayton I think mentioned it—where are we in getting that fixed? I think you are exactly correct. It is something that in terms of cost is not that great, but it strikes me as a real unfairness. It has to be a sore spot for the soldiers. Can we fix it and how close are we to getting it fixed?

General SCHWARTZ. Sir, let me say this. We are doing some of the things that we can do on our own. For example, we have just won a victory on the peninsula in terms of Korea being defined as a hardship tour. So, that allowed our soldiers, sailors, airmen, and marines to get up to as much as \$150 a month this year that they did not get last year. That is a victory. They are tremendously excited about that. As I travel around the peninsula, all of them say to me, General Schwartz, thank you. It makes a difference. So, we have had some success ourselves.

We are talking to the service chiefs about this separate ration issue and trying to articulate exactly the number of dollars that it would take for each service chief to chip in and try to pay that bill because it will have to come from the service chiefs. I am working that on my side.

As far as the tax exclusion piece of it, I have seen many Members of the Senate and House and we are talking about that and the positive impact that it would have on the service people.

So, I would tell you that we are moving, but we still have some work to do in terms of making it a reality.

Senator SESSIONS. I hope you will keep us informed on it. I think this Congress would be ready to help you on that. It does strike me to be a significant matter.

With regard to force protection in the 95 stations—you mean locations that you have troops in Korea—can those be consolidated? In the long run, would that be a cost-saver for our deployment in Korea?

General SCHWARTZ. Sir, thank you very much.

Yes, they can be consolidated. I have started an initiative which I call the Land Partnership Plan, which we introduced this year for the first time. To give you an example of the magnitude of that effort, of the 95 I spoke of, 46 are major installations. We are going to reduce that, according to the plan, to 25 major installations. That is significant.

We are cooperating with the South Koreans right now in that effort. We are moving it along, and I think it is going to be very successful. It is a 10-year plan. We have the ball rolling, and it looks like it is going to be a very successful one. We will save money in that effort, and we will improve the quality of life, and we will enhance the force protection effort for our servicemembers serving overseas. So, there are many benefits to that partnership plan that I am excited about.

Senator SESSIONS. I think you are on the right track with that. I think that is what the President and the American people want to see. We want to see enhanced ability to do our job, and we like to do it in a way that saves money rather than costs us money. If

in the short term it costs us some money, we are willing to put it up if in the long term we will receive a benefit.

I do hope that we can reduce the number of personnel there. Every time we can, we can afford to do more for the ones who are there, you have fewer people away from their family, and it is less transfer of American wealth, it seems to me.

So, I think you are on the right track and I hope that we can continue along that way. I believe you will have support here.

General SCHWARTZ. Thank you, sir.

Senator SESSIONS. General Pace, have you had prior experience with the drug effort prior to this assignment?

General PACE. Sir, in a minimal way in my previous assignment as the Commander of U.S. Marine Corps Forces in the Atlantic. We had some detachments that deployed to Peru and to Colombia to assist with riverine training. We also had some detachments that deployed to the southern border of the United States to assist law enforcement agencies there in detecting and monitoring traffic coming across the border. But that is the extent of my involvement.

Senator SESSIONS. As a Federal prosecutor, beginning in 1975, on the Gulf Coast dealing oftentimes with smuggling cases from Colombia which was the main source country for cocaine—and remains so—I have seen and wrestled with that. I have seen a lot of plans that are going to fix the problem. Through interdiction we are going to stop it, or we are going to do it through focusing on the source countries.

You correctly stated in your priority that demand reduction is number one. Demand reduction is a combination, in my view, of law enforcement and education and drug treatment and drug testing and things of that nature that do work in the United States.

But I will just tell you—and I think I have expressed this to you before—we are not going to solve our drug problem by spraying the coca plant in Colombia. At one of our meetings in the Drug Caucus recently, I asked the DEA Director what his budget was. It was \$1.3 billion, the same amount of money we are spending on *Plan Colombia*. Trust me, we will get a lot more anti-drug benefit from doubling DEA than we will for this *Plan Colombia*.

Now, I supported *Plan Colombia* and expressed real concern about our full understanding of what it is about.

So, I would like to ask you, again from what you understand the policy of the United States with regard to Colombia and *Plan Colombia*, if you would discuss with me what our goals are. How much of it is focused on drugs and how much of it is focused on helping Colombia reestablish a democratic society throughout its nation?

General PACE. Sir, concerning the \$1.3 billion supplemental last year, DOD has the responsibility to oversee about \$250 million. Of that \$250 million, about \$110 million to \$120 million is going to improving the capabilities of the three forward operating locations in Ecuador and El Salvador and in Aruba-Curacao so our airframes can fly so that they can do the detection and monitoring mission. The next large chunk of money is about \$55 million that has gone into the support for the Colombian military, to assist them in improving their intelligence capability. The next level down then is the amount of money we are spending to train up a 3,000-man bri-

gade, to assist them with some of the logistics and their maintenance, to assist in building the helicopter pads for the three groups of helicopters that are being bought by our State Department and sent down there. So, from the U.S. military standpoint, sir, the vast majority of the money is going into cement and into intelligence.

Senator SESSIONS. I am just concerned. I will just restate my concern with this whole matter. Colombia is the oldest democracy in this hemisphere, I believe, except the United States, and it is 38 million people. They have been allies and friends of ours. They are a significant trading partner of the United States, and their nation is in jeopardy. Some of their best people are fleeing the country, are they not, a real emigration because of the terrorism and the attacks and the marxist guerillas taking over substantial portions of their country. We suggest the only way we can help them is to help them fight drugs.

I think we need to be much more realistic about that. It would be a tragedy if we stand here and allow them to fall or be undermined or have the economy destroyed as a result of this guerilla effort.

General PACE. Sir, I agree with you that this is a fight for democracy in Colombia to support that democracy. It is not an expectation of being able to wipe out coca. If you did wipe out every coca plant in the world, some other drug would be fed to the demand side, and I stand by and agree with you that the demand reduction is the most important.

I have done a disservice to the State Department because I cannot speak to their numbers, but I do know that inside of their \$1 billion plus of the \$1.3 billion, that there are alternative crop developments and support for the other nine parts of *Plan Colombia* other than military that are the key to success.

But I agree with you, sir, this is supporting our friends and neighbors, supporting a fellow democracy, while we also assist ourselves.

Senator SESSIONS. We have a huge demilitarized zone for the FARC that allows them to operate without any attack, under complete protection. Now—I believe yesterday—the United States Ambassador to Colombia, Ann Patterson, has endorsed a proposal to grant Colombia's second largest rebel group a demilitarized enclave, another one, a second one, a 5,000-member National Liberation Army, another marxist group. Do you think that makes good sense militarily?

General PACE. Sir, if I may give you an answer to that question in detail in closed session, I would appreciate the opportunity to do that.

Senator SESSIONS. It does not make good sense to me. I hope that somehow we can reach a stage that we can help Colombia. They are a good nation and important to this hemisphere.

Admiral BLAIR. Senator Sessions, may I just add one point to your discussion with General Schwartz earlier? I think it is important to note that both Korea and Japan provide support to the U.S. forces there to the tune of \$5 billion, \$4.5 billion from Japan in direct contributions, half a billion in direct contributions from Korea. So, it is a shared responsibility over there.

Senator SESSIONS. We certainly do not want to destabilize that area and not be too rapid, but to the extent to which we could reduce our numbers, make life better for the ones who are there, it would be helpful.

Senator Landrieu.

Senator LANDRIEU. Thank you.

Generals, thank you for your service and for your testimony this morning. Let me just follow up because Senator Sessions and I have similar views about our operations and our focus on Latin America and Central America. Representing Alabama and Louisiana, they are neighbors right to our south, and so our attention is drawn quite naturally, if you will, to that particular area of the world. His expertise in this area I have come to respect in terms of his prosecutorial skills.

I happen to agree that our *Plan Colombia* has to be much more comprehensive. It is not just a war against drugs, but it is a war for democracy, to help strengthen those nations. It is most certainly in our interest, the entire country, and particularly in the southern part of our Nation, because of the close proximity of Colombia.

So, let me just ask you to follow up, General Pace. I know that you are only responsible for one part of this plan, but could you state one or two constructive either criticisms or changes you would make based on what you have seen in the last year or 2 that we could focus our attention on in terms of reaching the goals of *Plan Colombia*, anything that you could direct us? I know you have said some of that in your testimony already, but one or two things that you could suggest to us that we could do to perhaps reach the goals as outlined in *Plan Colombia*.

General PACE. Yes, ma'am, thank you. Senator, one of the problems about *Plan Colombia* is that there will be spill-over. Just as when Peru and Bolivia in recent years were very aggressive in attacking their problem, as they were aggressive, the businessmen, who are interested in making money, moved from the point of resistance, Peru and Bolivia, into the point of least resistance, Colombia, and set up shop there. So, as Colombia becomes aggressive in their implementation of their plan, the businessmen will look for another place to set up shop.

I think what we need to do collectively is to encourage the regional nations, the bordering nations especially with Colombia, to discuss with each other how best to handle the overall impact so that we do not continually have things seeping over borders. Then once they have had a chance to come up with regional solutions to regional problems, then we can be their partner in assisting them to attain those goals together.

Senator LANDRIEU. So, a more regional approach, which is I think the way we originally started with *Plan Colombia*, but perhaps as it went through the process, it got somewhat watered down. So, we should, in your opinion, focus on strengthening the regional aspects of that plan so that we could increase our chances of success.

General PACE. Last year there was about \$180 million allocated inside the \$1.3 billion that went to the region. About \$110 million of that went to Bolivia. About \$32 million was earmarked for Peru, and the rest went to about five or six other nations. As I said, I

think now we are in a position, now that we have seen the beginning impacts of *Plan Colombia*, to have a much more robust dialogue with the other nations to determine how to have a better regional approach.

Senator LANDRIEU. On another subject, each year through the budget cycle, we go through an annual debate over the needs of our CINCs and their battlefields and their theaters for surveillance. We talk a great deal about new technologies developing in that area. But currently we are bolstered by our JSTAR technology. General Pace and Admiral Blair, do you have enough access to these platforms? Are you having any difficulty with your surveillance? Are you getting adequate coverage in this regard?

General PACE. Senator, thank you.

I do not know that you will ever get a commander to sit in front of you and say he or she has all the intelligence they need. We always want more.

I do believe that my requirements receive a fair hearing inside the decision process here in Washington and that I am allocated a fair share of those intelligence, surveillance, and reconnaissance assets that are available. I would like to give you a more complete answer in closed session, to be more definitive about the types of problems I have.

The short answer is I do not have enough ISR, but it is not because of the system not being adequate or fair with me. It is just that across the board, we do not have enough national capability. Therefore, when you spread out what I need and what Tommy needs and what Denny needs and what the other CINCs need, there is just not enough to go around.

Senator LANDRIEU. Thank you, and I will look forward to that closed session.

Admiral Blair.

Admiral BLAIR. The primary airborne assets that are used to keep track of what is going on in the theater are virtually all in the so-called high demand/low density category, which means that the Joint Staff and then the Secretary of Defense have to make priority decisions.

We find in the Pacific theater that when there are no crises in other parts of the world, we can keep a pretty good eye on what we have to keep it on. When something is going on in other parts of the world that draws assets, an air war in Kosovo or heightened tensions in the Persian Gulf, then we are cut a little short with those assets that support General Schwartz and the rest of the theater that I keep an eye on.

We have been able to take partial measures to compensate, but we are squeezed a little tight. We made this input internally. We need additional Rivet Joints, EP-3s, and similar systems.

Senator LANDRIEU. I would like to help you with that.

Just one final comment, Mr. Chairman, if I could. General Schwartz, I look forward to helping you in your efforts to build up our bases in Korea. I have tried to focus my time on this committee on the areas of retaining in terms of retention. As my good friend from Georgia says, we may recruit a soldier, but we retain a family. When you are talking about retention, the issues that you have so beautifully expressed this morning I think are very important

and sometimes overlooked. The importance of housing and compensation and steady paychecks and predictable deployments I think have a great deal to do with the strengthening of our force. They are not soft issues. Sometimes we want to think there are hard issues and soft issues, but they are all important issues and they are all about building our force. So, I look forward to working with you.

My time is up at this point, but I would like some specific numbers from you about what we are talking about in terms of investments because this Senator thinks that we should take a part of this surplus and invest in our military now. We do not have to wait for the strategic plan in many instances to understand what our housing and our maintenance and operation budgets and our MILCON budgets need. So, I am hoping that this committee can be forceful in getting some of that investment made sooner as opposed to later.

General SCHWARTZ. Thank you very much, ma'am, and I will make it a point to come by and brief you.

Senator LANDRIEU. Thank you.

Chairman WARNER [presiding]. Thank you very much, Senator.

Our committee is fortunate to have two distinguished Senators, both with the name of Nelson, and our records show you arrived simultaneously this morning. [Laughter.]

If you gentlemen would sort out between yourselves, based on seniority or any other formula you wish, as to who goes first and who goes second.

Senator BILL NELSON. I am senior but I will defer.

Chairman WARNER. That is very gracious. I hope your colleague remembers that in the future.

Senator BEN NELSON. Thank you very much, Mr. Chairman, and thank you, Senator Nelson.

We appreciate very much the three of you being here today. It is good to see you and have the opportunity to visit with you. It is good to see General Pace who accompanied us and so very ably hosted us on our trip recently to Colombia. I appreciate very much every courtesy, as well as the opportunity to learn more about what is happening in that part of the world.

One of the subjects that is getting more attention today than it has maybe rather recently, but has in the past flared up and raised questions, is the relationship between the Republic of China and the People's Republic of China, the tensions that continue to exist and are exerted. Admiral Blair, you may have already gotten into this before we arrived. I apologize for being late. I was on the Senate floor for the campaign finance reform matter, so I was delayed getting over here.

But I guess the question I would have, having visited both Taiwan and mainland China, is what the threat level is to Taiwan from China at the present time, and what impact would the sale of certain military craft that is being sought by the Taiwanese have on U.S.-China relations?

Admiral BLAIR. Sir, I am senior but I will yield to General Pace on that. [Laughter.]

The current military state across the Strait, Senator, is that China is capable of causing damage to Taiwan. It is not capable of taking and holding Taiwan.

The requests which Taiwan has made include strengthening of their fleet air defense. It is largely an antiquated system and the types of surface combatants they have asked for would allow their surface combatants to take part in both defense of naval forces and in a joint defense of other areas within Taiwan.

Senator BEN NELSON. If we were to assist Taiwan by the sale of additional military hardware to them, what impact do you think that might have on U.S.-China relations?

Admiral BLAIR. It really depends on the nature of the equipment that is sold to them. Those decisions are in process now. My input to it is based on what is necessary to maintain sufficient defense, which is the standard that we use. That recommendation is rolled in with the sort of considerations that you mentioned and then the President will be making a decision. So, that is in process right now and I have made my input.

Senator BEN NELSON. The effort, though, would be to try to maintain some level of parity so that Taiwan may be able to maintain a position that would be sufficient to defend against whatever Chinese incursion might be threatened. Is that fair to say?

Admiral BLAIR. Yes, sir. I would say "balance" is probably a better word than "parity" since you are talking about one side on the defense and the other side that would be committing the aggression. But our policy is that the defense will be sufficient; that is, that aggression will not succeed.

Senator BEN NELSON. We would not want it to get out of balance if we can do something to help maintain that balance. Is that fair too?

Admiral BLAIR. That is what our policy is.

Senator BEN NELSON. That is our commitment.

Admiral BLAIR. Right.

Senator BEN NELSON. Thank you. I will defer to the Senator with more seniority. [Laughter.]

Thank you, Mr. Chairman.

Chairman WARNER. Very well. The Senator from Florida, Senator Bill Nelson.

Senator BILL NELSON. Thank you, Mr. Chairman.

Let me follow up on that, Admiral. You refer to your input. What is your advice to the White House with regard to the sale of the more sophisticated systems to Taiwan?

Chairman WARNER. Senator, we intend to go into a closed session. I am going to propound a question much along those lines in a moment.

The way I would suggest we phrase it is not the precise advice that this distinguished officer has given the President, which I think is of a confidential nature, but what are the various pros and cons of elements of the issues before the President and indeed before Congress, which does have a role in this. May I suggest we pursue that course in open session?

Senator BILL NELSON. Indeed, Mr. Chairman, but we are going to have to vote on that issue.

Chairman WARNER. That is correct.

Senator BILL NELSON. I want to be the best prepared that I possibly can and would like to have the advice of knowing the recommendations from the CINCs as we evaluate all the information and have to make our decision.

Chairman WARNER. Admiral, you may wish to pursue this.

I am not going to take your time. I will yield back. But I am going to talk about the ship requests and the pros and cons of the Kidd class of cruisers versus a follow-on of the current production line. What are the pros and cons of those two? That is the way I am going to proceed with it.

Senator BILL NELSON. Would the Chairman like to proceed and I will just defer to the Chairman?

Chairman WARNER. No. I am going to yield to you to go ahead. I was just giving you an example of ships as one area which I am going to probe.

Senator BILL NELSON. What I want is the best of advice from many different quarters. So, do you want to proceed in executive session on this issue?

Chairman WARNER. No. I am going to proceed in open session. I gave you an example of how I am going to address the question as it relates to the different views as to two types of cruisers which they are looking at. So, you proceed with your line of questions, but I am just showing you how I am going to do mine.

But I think the exact words that he transmits to the President of the United States are a matter of confidence.

Senator BILL NELSON. I respect that. Then what I am going to do is I am just going to defer any of my questions on Taiwan and come back after you have.

Let me mention just a couple other things. I noticed, General Schwartz, throughout your testimony, you keep coming back to intelligence and command and control. The more that I get into this from a standpoint as a member of this committee, as well as a member of the Foreign Relations Committee, there are a bunch of heroes every day that we do not know anything about because terrorist acts are not being committed because of our intelligence. I certainly agree with your comments there.

General SCHWARTZ. Thank you, sir.

Senator BILL NELSON. I think what we need to do is to commit whatever resources we have to, without blinking an eye, to see that we have sufficient intelligence to meet the terrorist threat around the world.

General PACE, I would just say that I thoroughly enjoyed your hospitality going to Colombia with a number of the members of this committee. I had never thought of the sensitivity and appropriateness of the location of your headquarters where so many of the foreign leaders happen to come in and out of Miami, and as a result, you get another crack at them in order to visit with them in order to develop a personal relationship with them to carry out your duties. Would you care to comment on that?

General PACE. Sir, thank you. That is exactly one of the great benefits of being in Miami, that it is a hub for transportation. We are about 15 minutes from the airport, so I am able to meet with the senior leadership of most of the countries who come through, who either come specifically for business in Miami because it is

such a great Latin hub, or who continue to transit up to DC. But it works out extremely well from my perspective, sir.

Thank you, both you and Senator Nelson, for going along with Senator Levin and Senator Reed. Your time in theater made a huge difference.

Senator BILL NELSON. General Schwartz, I am getting ready to go with the Intelligence Committee Chairman to Korea. You have heard the recent flap over whether or not—and this is a political issue. I do not need you to get into this, but whether or not we might have undercut the president of South Korea's attempts to reach out to North Korea. Do you have any comments in this area that you would share with us?

General SCHWARTZ. Sir, I think right now we are in a policy formulation stage with the current administration. So, we are waiting for that policy to be articulated to us. I mentioned earlier, before you got here, Ambassador Hubbard is in country right now with some effort to gather information, as well as propose some of the draft approach for the future. So, we are in the stage of a comprehensive review and policy formulation that I think will result in some real strategic guidance in the future.

Senator BILL NELSON. I would be appreciative of that policy formulation being passed on when you formulate it.

To what degree is the starvation continuing in North Korea?

General SCHWARTZ. Sir, I think nobody knows. One of the problems with North Korea is it is not open, it is not transparent. It is hard to get inside and really ascertain everything that is going on. They announced some figures of 250,000, their own figures, that died of starvation in the last 18 to 24 months. We have estimations up to a million that have died from starvation in the same period of time. The fact of the matter is it is serious, it is extensive, and it is continuing.

Senator BILL NELSON. Is there food from outside of North Korea that is getting in to try to help with the starvation?

General SCHWARTZ. Sir, there is. There is food coming in. Of course, the United States is providing food, Japan, the South Koreans, the Chinese. It is coming from all over the world.

They are struggling, as best they can, to produce some of their own food products. One of the only factories that they have that runs day and night, 24 hours a day, because of their energy shortage, is their food factories. So, they are trying to produce their own, as well as take all the aid they can, and they are still coming up short.

Senator BILL NELSON. Mr. Chairman.

Chairman WARNER. You can take another 2 minutes because I invaded your time.

Senator BILL NELSON. Well, no, I would be just as happy for you to proceed on your questions about Taiwan.

Chairman WARNER. Then we will have an opportunity for further questions.

Senator BILL NELSON. Thank you.

Chairman WARNER. I think we have had very good testimony, Admiral Blair, with regard to the importance of this Taiwan arms package. We conduct this oversight this morning against our obligations in law which are quite clear in many respects, but left

somewhat unclear in others, purposely so because there should never be any doubt about the United States' commitment to help Taiwan defend itself and, if necessary, come to its aid. I think you have been quite explicit and clear on that this morning.

Second, to maintain the balance, you expressed the need to continue to find ways to cooperate with China. So, there is this balance.

We are not here to discuss the question of independence. That is something our Nation has never stepped out on and I think quite properly because that issue is entirely left to the will of the people of Taiwan, together with the will of the people of mainland China, to resolve, hopefully in a peaceful way in the future sometime.

But the right to defend itself is inherent in this review of the package of arms that comes before us, and at the core of that is the issue of the type of destroyers. I mentioned cruisers earlier. I meant destroyers. The options are the Kidd class, which are ships that were built on the old Spruance type hull, and they are in a status of inventory today where they can be brought back on line with some renewed outfitting and, therefore, made an integral part of the Taiwan navy in perhaps 2 to 3 years, whereas the more recent production line of the Aegis Burke class would take a number of years.

Why do you not give us, first, the technical analysis of the two classes of ships, their likely availability to be integrated into the Taiwanese navy, and the pros and cons, as you view them, from a military standpoint? I think this package should be decided on military principles, hopefully, as nearly as we can. Give us an evaluation because that, I think, will be at the heart of this, certainly for this particular Senator, as we review this. So, if you would give us that.

Admiral BLAIR. Yes, sir. Before I do that, let me, if I may, talk a little bit about the consequences of a short-term military solution of the Taiwan issue which is basically reunification with China.

I have looked at that hard and from the points of view of both China and of Taiwan, that is a lose-lose situation. Not only would there be military losses on both sides, there would be civilian suffering on both sides. There would be tremendous economic damage on both sides: on the Chinese side, the loss of foreign direct investment, the loss of foreign trade; on the Taiwanese side, the sorts of effects that we saw even in 1996 when there was the near possibility of military action. Also, there would be secondary effects which always happen when conflict occurs, which you have spoken more eloquently about than any other Member of this Congress.

Chairman WARNER. We should make note of the fact that the Taiwanese people have invested a tremendous amount of their own resources in mainland China's industrial base. Am I not correct in that?

Admiral BLAIR. There are 70,000 Taiwanese living in Shanghai as we speak.

Chairman WARNER. Also, they have invested in the industrial base very heavily.

Admiral BLAIR. They are the single largest investor, and the trade across the Straits has been increasing since the current Taiwanese government came into office. So, all of the positive incen-

tives are on the side of down-playing the military confrontation and emphasizing those things which would bring Taiwan and China together over time.

Chairman WARNER. When you say "together," you mean some resolution between the wills of the people of the two nations, whatever that may be.

Admiral BLAIR. However that may be negotiated. There are a large number of arrangements which could be worked out if there were trust, and today there is simply not trust on either side. The only way that I know to build the conditions for enduring security for Taiwan is long-term development of some sort of a political arrangement between Taiwan and China with the sorts of guarantees and assurances that Taiwan requires to feel safe, as well as to be safe.

So, the great area that Taiwan, China, and the United States have in common is to emphasize those things which lead to a peaceful solution and to deemphasize those things which tend to raise tensions, bring confrontation, and exacerbate that sort of a situation. So, I think even while I am sitting here in my uniform talking about the military aspects of the situation, we need to keep in mind that this is a tool toward the larger end, which is security for Taiwan and a long-term development of China and long-term development of the United States.

I really find that people want to classify everyone who is involved in this issue as either pro-China or pro-Taiwan. I am pro-American. I want to do what is best for the United States in this instance, and I think that is what we have to keep in mind. Certainly what is best for the United States is the long-term peaceful resolution of the issue between them.

Chairman WARNER. I think there is even a larger perspective. It would be enormously destabilizing to the entire region were there open conflict. So, it is not just the United States, but it is the region.

Admiral BLAIR. It absolutely is. Just look at 1996, what the short-term shock waves were that went through Asia when the confrontation went up.

So, we make our military evaluations, we carry out our responsibilities, but I think we have to remember our role in the overall policy and in the overall direction which is in the interest of both Taiwan and China.

Now coming to the Aegis combatants versus the Kidds, the Kidds have about 12 to 15 years of service. That is plenty of useful life left. As you mentioned, they could come on line and actually be available in about 2 years. They would be equipped with a fleet air defense system called the New Threat Upgrade, or NTU.

An Aegis combatant could take various configurations, but it would basically come on line about 2008-2009, and it would be equipped with some variant of the more capable Aegis weapons systems. The area in which the Aegis weapons system is more capable than the NTU system is in the volume of threats that it can handle and in some of the extreme profile missiles.

There are two other things that you have to think about as you make the decision, Mr. Chairman. One is the ability of the Taiwan navy to absorb complicated systems. Either one of these would be

the most capable surface combatant that the Taiwan navy had operated, and that is a consideration as far as logistics and manning and training.

The second thing is major differences from a capabilities point of view. The Aegis system could eventually provide a platform on which the theater missile defense systems that the United States Navy is developing could be fielded. The NTU Kidd could not. So, the major capability difference in the two systems would be in its future upgrade potential. That is fundamentally the difference between those two systems.

As I mentioned, the requirements of the Taiwan navy for fleet air defense are there today. It is not very robust right now, and it is something that is of concern to the Taiwanese navy.

Chairman WARNER. Now, let us once again look at the pros and cons because in my opening questions to you, my recollection is you clearly agreed with me that as China proceeds to install more and more missiles, the balance is slipping away and that this arms package should be viewed as restoring that balance of military capabilities of deterrence and defense for Taiwan.

Now, given that trend of the putting in of the Chinese missiles—and it appears that it is going to go on for some period of time—will the Kidd class of ships right the balance for a period right now?

Admiral BLAIR. No, Mr. Chairman, it will not. Right now we cannot sell a theater missile defense system to Taiwan because we have no theater missile defense systems to sell to them.

Chairman WARNER. I understand.

Admiral BLAIR. They have the Patriot PAC-2 missiles, which is the most capable system we have. They are point defense systems.

Chairman WARNER. So, the Kidd class of ships will not bring about a balancing of the missile threat as perceived by Taiwan.

Admiral BLAIR. That is correct, and neither will the Aegis.

Chairman WARNER. At this point in time.

Admiral BLAIR. At this point.

Chairman WARNER. Because you have to bring in software and perhaps some modification to hardware and certainly an inventory of missiles to incorporate that into the Aegis system.

Admiral BLAIR. We have to develop that, yes, sir.

Chairman WARNER. You have to develop it, and we do not have a really good time line as yet on the development of that. Am I not correct?

Admiral BLAIR. That development program is underway and it is in the order of about 2008–2009 itself.

Chairman WARNER. Of that software and hardware to bring that system up for a theater missile.

Admiral BLAIR. For the shorter range of the two Navy systems in development, yes, sir.

Chairman WARNER. Do you want to have any amplification of that?

Senator BILL NELSON. Yes, Mr. Chairman, for this new member of the committee, would you or one of your staff or perhaps one of the panel describe the difference between the Aegis and the Kidd class? What are the capabilities?

Chairman WARNER. The Aegis is interesting. When I was Secretary of the Navy, we began the development of Aegis. Aegis is a generic term with regard to an electronic system to engage various types of threats to a ship. It is in an evolution and expanding.

Now, let us go back again. I think it is very clear because this is the sort of record that will be before the Senate, such that those Senators who wish to address it, by virtue of speech or otherwise, can have the benefit of it.

We go back to the Spruance hull, which has been in inventory for many years in the Navy, and these Kidd class are on that hull. But you say that the system is primarily air defense and not missile defense. Not primarily, but that is the distinction. Am I not correct?

Admiral BLAIR. Yes, sir. The Aegis class is also on a Spruance hull for the cruisers. For the destroyers, it is on a new hull.

But the primary difference is that an Aegis system, which was originally designed against the Soviet threat, can handle a higher volume of incoming missiles at the same time than can the Kidd class NTU. So, it is primarily having to do with the volume of missiles arriving.

As far as the performance of missiles that can be handled, they are roughly comparable. So, from the fleet air defense point of view, they would be virtually the same, that is, for handling anti-ship missiles against the fleet.

The primary difference is that once the United States Navy does develop theater missile defense (TMD) programs, they will be based on the Aegis fire control system. Therefore, if Taiwan had Aegis platforms, they could be upgraded with missiles software and some hardware to TMD configuration.

Chairman WARNER. In the same way we are going to upgrade our own units.

Admiral BLAIR. The same way we plan to upgrade our own, yes, sir.

Chairman WARNER. But I think we have to go back again. We are talking about land-based mobile missiles which China is putting in right now.

Admiral BLAIR. That is correct.

Chairman WARNER. I want to make it very clear in the record, that the Kidd class cannot engage those at the present time. Is that not correct?

Admiral BLAIR. That is correct, and neither can the Aegis.

Chairman WARNER. Neither can the Aegis. It is the Burke class.

Admiral BLAIR. Or the Ticonderoga class.

Chairman WARNER. Or the Ticonderoga class, which was the initial Aegis-type hull.

Admiral BLAIR. Which is the cruiser level and the Burke is the destroyer level. Right now neither of those can engage the CSS-6s and CSS-7s, which is what China is deploying right now. They have about 300 of them that can range Taiwan.

Chairman WARNER. So, with the Kidd class, they can be introduced into the fleet and integrated into the Taiwan navy within, say, 24 to 30 months, somewhere in there.

Admiral BLAIR. Yes, sir.

Chairman WARNER. For the hulls, including the upgraded system, we are looking at 2008, 2009, 2010, many years out.

Admiral BLAIR. That is right. We have a building program going on in two yards. You put in the order. It will be 2008–2009 before it is available.

Chairman WARNER. Then you have to look at what is the threat facing Taiwan not only from the land-based missiles, but other threats that the Kidd class could engage and help deter. What would be the advantage of the Kidd class being integrated into the Taiwan navy now in, say, 24 to 30 months?

Admiral BLAIR. It would be able to provide fleet air defense so that the Taiwanese navy would have air cover as it operated at sea out of range of land-based air, which it does not now have.

Chairman WARNER. Now, would that help bring into balance the disparity that we see between mainland China and Taiwan?

Admiral BLAIR. That would increase the Taiwanese capability to engage other aircraft across the Strait which the Taiwanese navy has very little capability.

Chairman WARNER. So, the Kidd class does make a substantial contribution to add to the deterrence of the threats.

Admiral BLAIR. That is correct, yes, sir.

Chairman WARNER. It gives their navy really a training base for that class of ships which they could profit from between now and, say, 2008–2009 timeframe so that if they took the Kidd class now, they would be better prepared to accept at a later date, either an exchange program or the addition of the upgraded Burke class.

Admiral BLAIR. Yes, sir. That is correct. It is the same propulsion system, for example, many of the same auxiliary systems, and so it would give them capability in complex surface combatant operation, which they do not have now.

Chairman WARNER. So, one of the options that is before the President would be to offer the Kidd class now with the understanding that it substantially enhances the naval element of deterrence, and it would provide a training base for a follow-on acquisition, if the threat persisted, for the upgraded Aegis system which would have the theater missile defense capability.

Admiral BLAIR. Exactly correct, sir.

Chairman WARNER. I think we have pretty well put that record together. Do you wish to add to it, Senator?

Senator BILL NELSON. Just to go back to the Admiral's statement of his two goals, the long-term guarantees for Taiwan. It sounds like that system would give long-term guarantee. But the other goal of the Admiral was a long-term peaceful resolution. Does it enhance that? That is the question that we have to answer.

Admiral BLAIR. Sir, that is correct. As I mentioned, the lower the level of missiles on the Chinese side and responses on the Taiwanese side and counter-responses on the Chinese side and counter-responses on the Taiwanese side, I think the more conducive to a long-term resolution. So, restraint on the Chinese side would be a definite factor in doing that. If the Chinese continue to add 50 missiles a year and increase their accuracy, which has been their program in the past, then it does not take a detailed military analysis to tell you that at some point that makes a military difference and defense is not sufficient. It is that ratcheting up that I think does

not serve the interests of either Taiwan or China, but it requires restraint by China, which has not been shown yet, which I have talked to them about and many other representatives of our Government have talked to them about frequently and I would hope we could see.

Senator BILL NELSON. Mr. Chairman, may I?

Chairman WARNER. Go ahead.

Senator BILL NELSON. That is useful information to me because with the Intelligence Committee Chairman, I am going to Beijing as well. Are they, in fact, increasing their missiles 50 a year?

Admiral BLAIR. Yes, sir, they are right now.

Senator BILL NELSON. At this present time.

Admiral BLAIR. At this present time.

Senator BILL NELSON. Those are the ones you described as CSS-6s and 7s?

Admiral BLAIR. 6s and 7s, right.

Senator BILL NELSON. Are those air-breathing missiles or are they rockets?

Admiral BLAIR. They are ballistic missiles. They go out of the atmosphere and come down.

Senator BILL NELSON. So, they are liquid-propelled, not air-breathing engines.

Admiral BLAIR. Solid.

Senator BILL NELSON. As opposed to air-breathing like cruise missiles.

Admiral BLAIR. Yes, as opposed to cruise missiles which go a couple hundred feet. They are ballistic missiles.

Senator BILL NELSON. What are the ranges of these 6s and 7s?

Admiral BLAIR. It is about 500-600 kilometers. They are on the longer range of the short range. They are like Scud Deltas, the kind that threaten General Schwartz's forces.

Senator BILL NELSON. That is very helpful information, Mr. Chairman.

Chairman WARNER. I thank you, Senator.

Senator Dayton, did you wish to participate in this colloquy?

Senator DAYTON. No, I will wait until the closed session. Thank you, Mr. Chairman.

Chairman WARNER. On the issue of the fixed-wing aircraft, Admiral, they wanted some P-3s. Did you talk about the fixed-wing package and what are the pros and cons of some of those requests?

Admiral BLAIR. I would say Aegis and Kidds have been enough publicly discussed that I think it is fine to talk about them in open session. I would rather go to closed session to talk about some of the other aspects of the program.

Chairman WARNER. Senator Levin.

Senator LEVIN. I just have one additional question of General Pace. It relates to the SOUTHCOM's engagement program. I have been a supporter of our engagement program with foreign militaries, particularly relative to activities on our part which would impart respect for human rights and the proper role of a military in a democratic society.

So, I was very supportive of our effort last year to close the U.S. Army School of the Americas, but to reopen a different school with a different focus, which was to authorize the Secretary of Defense

to establish the Western Hemisphere Institute for Security Cooperation (WHINSEC). I am wondering if you would describe for us the Southern Command theater's engagement program, tell us how the Western Hemisphere Institute for Security Cooperation fits into that.

General PACE. Senator, thank you.

One of the things that we are able to do is, through the support of Congress, to provide training and education opportunities for almost 2,500 officers per year from 31 of the 32 countries in my area of responsibility. They go to various schools, our war colleges, our command and staff level schools. They also go to the WHINSEC where they are able to learn about planning, about logistics, et cetera.

Embedded in that training, especially at the WHINSEC, are courses in human rights, in proper subordination of the military to civilian authority. In all of our exercises throughout the region, of which we conduct about 17 per year, either bilateral or multilateral, we take the opportunity through both demonstration and scenario development to train in subordination of the military to civilian rule.

I have not had the opportunity, Senator, to visit WHINSEC yet, so I do not have a complete layout in my mind of the curriculum that they have, but I do know that they do, in fact, address human rights.

Senator LEVIN. Could you familiarize yourself with that curriculum and then tell us how the two fit for the record?

General PACE. Yes, sir. I will, sir.

[The information referred to follows:]

U.S. Southern Command's engagement strategy incorporates promoting a culture of respect for human rights within the military and security forces of nations in our AOR. The human rights program focuses on strengthening respect for human rights through education, training, conferences, seminars, and subject matter expert exchanges.

At the Western Hemisphere Institute for Security Cooperation, or WHINSEC, the human rights curriculum provides critical support to this program. Their human rights course is pass-fail and ensures each graduate gains a basic knowledge of human rights principles. In addition, all WHINSEC instructors are required to pass an intensive human rights course and to integrate human rights principles into every course. Students are therefore taught human rights in the context of different subjects.

The curriculum developed by the WHINSEC human rights staff is unquestionably one of the most comprehensive offered in any military institution anywhere. It includes well-researched, in-depth, case studies based on historical events, which are used in advanced human rights training.

The WHINSEC human rights staff also supports USSOUTHCOM strategy by traveling throughout the AOR to provide courses to larger groups of military officers and noncommissioned officers. Many of the students that attend WHINSEC advance to senior positions of leadership in their country's security forces. By incorporating respect for human rights as a central theme in their professional education, we effectively influence the culture of the security forces at large.

WHINSEC's human rights curriculum is one of the most important tools available to USSOUTHCOM for strengthening respect for human rights by military and security forces in the area of responsibility.

Senator LEVIN. Thank you.

Chairman WARNER. Thank you very much, Senator.

Gentlemen, I want to cover some other subjects rather quickly so that the open record has reference to them.

Panama is an ever-present concern to us, General PACE. We discussed that last night in our private meeting, and you gave me certain reassurances. There was concern at one time that mainland China was trying to gain a stronger foothold of influence in that region, and also the respective operation of the Panama Canal from a technical standpoint, and also the stability of the government down there, and any other aspect you wish to cover.

General PACE. Sir, thank you.

There is a Chinese company on each end of the Panama Canal. They provide port services. They in no way interfere with or are a part of the actual operation of the canal. So, unless a ship requires on-load or off-load at either end of the canal, they play no part at all in the day-to-day operation of the canal.

The canal itself, under the commission that is being run by the Panama Government, is being run extremely efficiently. From an outsider's point of view, they have run that extremely well, and their plans to increase capacity in the future look very well laid out.

As they will tell you and as I said to you yesterday, the greatest threat to the operation of the canal right now is the environmental impact on the watershed. As development takes place, silt and runoff—

Chairman WARNER. Are you talking about land development which removes the natural growth, and that results in a water runoff that impairs the operation of the canal because I think it takes—what did you say—500 million gallons of water to—

General PACE. It takes 55 million gallons of water per ship per transit. There are 40 ships per day, give or take. So, you have a huge amount of fresh water being used every day that comes from those watersheds. The canal commission, rightfully so, is concerned that as they have development of what is currently vacant land, that the silting and the runoff will impact the ability of the country to collect the water it needs to run the canal.

Chairman WARNER. Now, the government and the stability and the relationships with that government.

General PACE. Sir, we have excellent relationships with the government through the U.S. Ambassador. Minister of Security Contero is very friendly toward the United States. He has made possible such opportunities for us as assisting them in putting together a national command and control location, which they are building in the former Howard Air Force Base. So, as far as today's environment inside of the ministries with whom I do business, it is very friendly, sir, and looking to the future.

Chairman WARNER. Now, the forward operating locations for our air elements in the counternarcotics operation. Is that proceeding at a satisfactory rate?

General PACE. For the most part, it is, sir. We're on track. At Manta in Ecuador, we will close that facility in about a week. The major part of the \$60 million worth of upgrade to that facility will take place over the next 6 months. That is on track.

Chairman WARNER. Last night you spoke about your own professional judgment with regard to the time line of the ability of Colombia to come to grips with this very serious problem. There were two aspects of it that impressed me, and that is your professional

views as to the length of that time line. My recollection is you said about a decade, and we are barely into it at this time. Second, the impact on the adjacent countries and how the United States will be considering, independent of *Plan Colombia*, financial packages to help them stem any flowing into their nations of the current operations in Colombia.

General PACE. Senator, my estimate, based on my discussions with the Colombian leadership, is that for the Colombian military to be large enough and well enough educated and trained, it will take about 3 to 5 years for them, in conjunction with the Colombian police, to provide security, inside of which then the other nine elements of *Plan Colombia* can take root. My estimate, again talking to government leaders, is that *Plan Colombia* itself overall will take about 10 years to show the benefits of rebuilding the fabric of that democracy that has been destroyed by the drug traffickers.

With regard to the spill-over and therefore the impact on the neighboring countries, yes, sir, regional solutions to the regional problem, properly supported by the U.S. Government, I think is the requirement.

Chairman WARNER. You might enumerate those countries presently under consideration for that assistance.

General PACE. Sir, my recommendation would be primarily those that border Colombia, which include Panama, Ecuador, Peru, Bolivia, Brazil, Venezuela, if in fact we are able to have satisfactory accommodation with that particular government. We should not, however, completely overlook places like Paraguay, Uruguay, and other nations through which drugs transit to get to the sea to get to Europe.

Chairman WARNER. Part of our training involves the use of their helicopters, which we are going to supply. We are always concerned—and we saw the concerns manifested in the Kosovo operation—about hand-held small weapons that can interdict airborne platforms such as the helicopter. How serious is that threat? Do we have any indication that the insurgents will be trying to acquire on the open market in the world such weapons? How are we training to deal with that situation?

General PACE. Sir, we take that threat very seriously. We presume that an entity that possesses hundreds of millions of dollars in illegal profits every year has the capacity to go on the open market and buy shoulder-held surface-to-air missiles. We have no intelligence to confirm that. Yet, we train to that probability. The configuration of the helicopters that the State Department is buying took into consideration the likelihood that they would operate in the same environment.

Chairman WARNER. So, they have the state-of-the-art equipment for defensive measures.

General PACE. Sir, they do.

Chairman WARNER. Periodically Haiti should be examined. Give us an update on that. That posed in the past serious problems in this country.

General PACE. Sir, Haiti is very much in the policy arena right now for me. I am prepared and have on the shelf ready to execute four exercises this year, which are called medical readiness exercises. Those medical readiness exercises will, in fact, go in and as-

sist the population with their medical problems. But those are currently on hold pending a policy decision on government-to-government issues.

Chairman WARNER. Senator Reed, I am just doing wrap-up questions. I see you are present. Why do you not take your regular time at this time?

Senator REED. Mr. Chairman, first let me welcome and commend General Pace, Admiral Blair, and General Schwartz and thank them for their service to the country and the fidelity of the great men and women they lead each and every day.

I have been on the Senate floor and I understand many questions have been asked. I also understand that we are going into a closed session. So, Mr. Chairman, rather than taking some time now, I would simply yield back my time to you and then move forward.

Chairman WARNER. General Pace, the Vieques problem is a continuing one. We now have a carrier task force that is on the verge of deployment. It is my understanding that the previous one, the Truman task force, was only able to do inert. What is the status of this current task force and its ability to use those ranges in your judgment?

General PACE. Sir, I need to defer to the Chief of Naval Operations for the train-up of his forces. I could restate my comment that I made before this committee when I was Commander of U.S. Marine Corps Forces Atlantic.

Chairman WARNER. Well, we know the essential nature of it.

General PACE. Yes, sir.

Chairman WARNER. The problems in your AOR, General Schwartz, from time to time of the attitude of South Korea toward the presence of our military and their families. Where does that situation rest today versus a year ago?

General SCHWARTZ. I think overall I would characterize the attitude of the South Koreans towards our military as very positive. The majority of the people, high into the 90s, respect the presence of and the deterrence value of U.S. servicemembers on the peninsula. There is no doubt about it. There is a small percentage of the people who do not understand our presence, who do not understand the war itself, how it originated, why we are there. Most of them are younger, college. They spend their summers protesting and they get a lot of visibility, but I would have to tell you the silent majority, the majority of the South Koreans, fully understand the deterrence value and the presence of U.S. servicemembers on the peninsula.

Chairman WARNER. Thank you very much.

General PACE. Senator, I apologize. May I give you just a little bit more information on Vieques? I would be remiss as a leader if I do not bring up one problem.

Chairman WARNER. All right.

General PACE. It is a quality of life problem, sir, the quality of life for my very dedicated Army soldiers and families who have moved from Panama to Fort Buchanan. In the process of doing that, renovations were to be made. For understandable reasons, policy reasons, right now the construction money that was allocated to build an elementary school, \$8 million last year, and the money to renovate housing, \$25 million this year, has been held in abey-

ance. So, as we go through the policy debate, which I understand, the Army families there are being held hostage.

Chairman WARNER. We will take note of that, and thank you for bringing that up.

Admiral Blair, you have India in your AOR. The Central Command has Pakistan, and when the Central Command commander was before this committee, he stated that the two of you work very closely together. Give us an update of that situation, the seriousness of it compared to last year and now, as well as the 28 percent increase in military budget that India has announced, and any other aspects of that situation that you think is important that we learn.

Admiral BLAIR. Sir, I think the developments on the Indian side have been quite positive since I last appeared before this committee. Although they have not signed the Comprehensive Test Ban Treaty and they are continuing to develop their nuclear weapons arsenal, I think they are working their way towards the principles of a high nuclear threshold and a good stewardship of those weapons.

The earthquake that took place in Bhuj, India was a terrible human tragedy. The loss of life was on the order of 20,000 to 30,000. On the other hand, the response to it was a real regional and, in fact, international effort, including supplies from Pakistan. A couple of flights of C-130 aircraft with relief supplies from Pakistan landed in India and off-loaded the supplies, and they were welcomed by India.

The situation in the Kashmir itself, there continues to be casualties within Jammu/Kashmir, fire across the border. But there are intermittent contacts between India and Pakistan, looking at talking about the situation again after the disappointment following the Lahore Summit and the conflict in Siachen Glacier.

So, on the Indian side, there are some positive developments, and it certainly does not seem to be any worse. General Franks and I both agree that the United States needs to maintain contact with both sides of southern Asia, both with Pakistan and with India, so we can exert the restraining influence on their interaction with each other and develop independent relationships. We do not want to shift our weight from Pakistan where it had traditionally been and put it all on India. We think we need a balance on both sides. I think we are taking steps to do that on the Indian side.

Chairman WARNER. Last question. I would like to have both Admiral Blair and General Schwartz comment on the status of the North Korean ballistic missile program. We will take it up in greater detail in closed session, but I would like to have your views, to the extent possible, here in open session. Why do you not lead off, General Schwartz?

General SCHWARTZ. Let me characterize it like this. It is still very aggressive. They are producing a certain number of missiles each year that we could talk about in closed session. But they are the number one proliferator of missiles in the world, and they are being very aggressive in that regard.

Chairman WARNER. They are selling them. What countries do we know now are actively engaged in negotiations?

General SCHWARTZ. We know Iran, Iraq, Pakistan, Syria, Yemen, and Egypt are recipients of some of their missiles at this time.

Chairman WARNER. Admiral Blair.

Admiral BLAIR. Sir, I would not add anything to what General Schwartz said except that the moratorium on testing missiles, which the North Koreans have undertaken to maintain as long as negotiations with the United States continue, has in fact continued. Although the North Koreans seem uniquely capable of selling missiles that have not been tested, and some fool countries seem uniquely capable of buying them even though they do not know if the damned things work or not, they have not in fact fired them since that time took place.

Chairman WARNER. Members of the committee, we are now in the process of Senate floor voting, three consecutive votes. I would suggest that we all go to the floor at this point in time, ask our witnesses to extend us the courtesy to do this most important function, and then we will resume next door in the Intelligence Committee hearing room for a closed session. My estimate would be it could be as long as 30 minutes before we return.

Senator LEVIN. I have three quick questions.

Chairman WARNER. Yes, of course.

Senator LEVIN. Admiral, is it in our national security interest that that moratorium on flight testing on the part of North Korea continue?

Admiral BLAIR. From the military point of view, it is certainly in our interest that it continue. As to the price we pay for it, that is for another to decide.

Senator LEVIN. But militarily at least it is in our interest.

Admiral BLAIR. Militarily, just as with the Agreed Framework, the less development of nuclear technology, the less missiles they test, the better from our point of view.

Senator LEVIN. General Pace, on the unmanned aerial vehicles that are being used in Colombia by Department of State contractors, our report to the four of us who went there, who I have referred to before, indicated that the low cost and the low risk technology that is reflected in those UAVs should be assessed for expanded use for the detection of drug labs and other important missions such as border control and that Colombia offers an excellent area for such an assessment. Could you tell us very briefly in your view whether those UAVs have performed a useful function down there?

General PACE. Sir, they performed a very useful function. We were delighted. Senator, they were a test bed. They were fed to us as an opportunity. As it happened, during the time they were there, we had some things going on in the region I can talk more about in closed session to which they were very useful. So, from my vantage point, not only for my responsibilities today but also as a military person who might need to employ them elsewhere in the world, very useful.

Senator LEVIN. Would you like to see them continue there?

General PACE. I would, yes, sir.

Chairman WARNER. Thank you, Senator Levin.

Any other questions from members? We will recess for a period of time, maybe up to 30 minutes, and then reconvene in the Intelligence Committee hearing room to continue our hearing.

We have had an excellent session this morning. I commend each of you for your important contributions and look forward to the additional testimony in closed session. We are adjourned.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR RICK SANTORUM

ARMED WHEELED VEHICLES

1. Senator SANTORUM. General Schwartz, the Army is in the process of fielding an interim force that is designed to span a perceived near-term operational shortfall first recognized during the Persian Gulf War. To that end, the Army recently selected a wheeled vehicle to serve as the armored vehicle that will be used by interim brigade combat teams in operations from peacekeeping through full spectrum combat.

There has been a lot of debate recently over wheels versus tracks for armored vehicles and I don't expect to conduct such a debate here. I am curious, however, about any lessons we may have learned in the past about mobility tradeoffs between different vehicle types. It seems likely that in the event of hostilities in your theater of operations that access to roads will be limited due to damage, debris, or refugees.

While the new Army wheeled vehicles may be good for peacekeeping activities, do you have any concerns about the tactical mobility of wheeled vehicles in off-road environments in the Korean theater of operations? To what extent has the Army initiative addressed concerns you might have about strategic responsiveness? Do we have the strategic lift assets required to execute established deployment goals and objectives?

General SCHWARTZ. No. There are two primary reasons that these new vehicles improve our capabilities in Korea. First, there is a large amount of terrain and road/bridge limitations on the Korean peninsula that favors wheeled vehicles. Second, these vehicles will not operate in isolation but as part of tailored, combined arms units. The complementary nature of "wheeled" units with traditional "heavy" units will increase our warfighting effectiveness. They will also reduce our logistical footprint, thus extending our operational reach.

HIGH DEMAND/LOW DENSITY ASSETS

2. Senator SANTORUM. Admiral Blair, General Pace, and General Schwartz, during Operation Allied Force in Kosovo, one of the newly coined terms was high demand/low density assets. If these assets were so highly tasked in this small contingency, doesn't that indicate we do not have enough of these assets to execute the national military strategy? What are the key high demand/low density assets in your area of responsibility?

Admiral BLAIR. [Deleted.]

General PACE. The availability of some high demand/low density (HD/LD) assets may be inadequate to satisfy multiple CINC requirements if surge operations are occurring in one or more theaters. With the national military strategy (NMS) currently under review, I must defer to the Joint Staff to provide a more detailed assessment of HD/LD availability to support the current or revised NMS.

The key HD/LD assets that support our AOR are the [deleted].

General SCHWARTZ. [Deleted.]

DEMILITARIZED ZONE FOR THE ELN

3. Senator SANTORUM. General Pace, one of the issues being considered by senior government officials of Colombia has been the creation of a demilitarized zone for members of the National Liberation Army (ELN). Do you see the creation of a demilitarized zone for the ELN as a positive or negative development in reducing the flow of narcotics into the United States and in achieving a lasting peace in Colombia?

General PACE. The creation of the demilitarized zone for the ELN will not significantly reduce the flow of narcotics into the United States. The vast majority of coca is cultivated and transported outside the area under consideration. [Deleted.]

QUESTIONS SUBMITTED BY SENATOR WAYNE ALLARD

STATUS OF FORCES AGREEMENT

4. Senator ALLARD. Admiral Blair or General Schwartz, I understand you recently revised your Status of Forces Agreement with Korea. What improvements did you make and what prompted the change?

Admiral BLAIR. The force structure is correctly sized for our current mission but must be fully-manned and equipped to maintain it as an effective and ready force. The force structure plan details the number and type of forces. Fully manning the planned force structure is the problem. Increasing the force structure may compound the personnel shortage by placing a greater personnel demand on the undermanned critical specialties.

In U.S. Pacific Command (USPACOM), shortages exist in several of our critical specialties, especially in our mid and senior level non-commissioned officers (E5-E9) which represent the bulk of our experience and enlisted leadership. For example, in our latest readiness assessments, USPACOM intelligence specialists (E5-E9) are only manned at 66 percent; aviation maintenance technicians (E5-E9) are manned at 70 percent; and communication specialists (E5-E9) are manned at 83 percent. Korean linguists manning specialty remains at 64 percent. Additionally, rated pilot staff manning at Pacific Air Forces is at 81 percent with no projected increase in the near term.

Personnel in these low density and high demand specialties cannot be replaced overnight. Length of training and the years required to gain valuable experience require time. Support of retention-related incentives is essential to the health of our forces and keeping the experienced personnel we have today. Recent pay increases have helped and need to continue, but support of infrastructure and readiness fixes also weigh in our members' quality of life, and their decision to stay in the Armed Forces. Where manning shortfalls are most severe, selective reenlistment bonuses should be considered as an option.

In addition to manning considerations, headquarters reductions continue to impact our ability to be proactive and plan as the reduced staff manages an increasing number of critical programs required in support of national security and the NMS. As I testified, our staff is taking the lead on future capabilities such as the joint mission force, expanding the littoral battlespace, and the combatant headquarters of the future with CINC21. These capabilities suffer when our limited staffs are cut further.

Within the Defense Department, we are minimizing the impact of our shortages with reliance on the outstanding capabilities of the Reserve components. This capability must be recognized and supported within and outside the Defense Department. The services and our components have made significant progress in correcting personnel problems, but maintaining Active and Reserve personnel accounts at appropriate levels in each skill area and grade is a challenge that will receive our continuous attention and emphasis.

General SCHWARTZ. Let me answer the second part of your question first. We felt we needed to revise the SOFA in order to address long-standing perceptions of the Korean people that the SOFA was unfair to them in several respects, especially in comparison to our SOFA with Japan. In 1995, the Republic of Korea (ROK) Government raised about 20 issues for discussion, headlined by their strong desire for pre-trial custody of SOFA personnel accused of violating ROK law, similar to that in Japan. Former Secretary William Perry offered comparable treatment to Japan and our other allies on custody in exchange for certain assurances of fair treatment and a substantial reduction of issues. However, after considerable effort to reach agreement, negotiations on these issues stalled and were suspended by the two sides in 1997.

After a technical review of the issues at the expert level in May 1999, the Korean side attempted to restart negotiations with a compromise proposal. As it failed to fully address our concerns for the rights of accused persons and as our mutual failure to resolve these issues threatened to drive a wedge in the alliance, former Ambassador Stephen Bosworth and I asked our team to develop creative solutions for resolving the impasse. After a lot of hard work, a new U.S. proposal on custody and assurances was delivered to the Korean side in May 2000. In addition, the Korean side raised several other high priority issues, including environmental protection, labor rights of Korean employees of USFK, and plant quarantine. That led to a resumption of formal negotiations on 2 August 2000 and ultimate agreement for revision of the SOFA on 18 January 2001. The revisions were subsequently approved under the procedures of both governments and entered into force on 2 April 2001.

A number of significant changes were made. First, although under the previous agreement the U.S. was permitted to retain custody until the completion of all judicial proceedings, including appeals, the ROK may now receive custody upon indictment if it requests in any one of 12 categories of serious cases. Such cases include murder, rape, kidnapping, arson, drug trafficking or manufacturing, robbery with a dangerous weapon, and also cases of assaults, drunk driving, or fleeing the scene of an accident that result in death. In very serious cases of murder or rape, if the Korean police arrest a SOFA accused in the act, in hot pursuit, or before he or she returns to military control, they may retain custody.

However, our personnel will be protected by a very strong package of "due process" rights while in Korean pretrial custody and confinement, including the right to release on bail. A person subject to custody upon arrest (e.g., caught in the act for murder) may not be interrogated until BOTH a U.S. representative and a lawyer representing the accused is present. Statements taken without their presence are not admissible in court. Korean authorities may not question an accused in their custody after indictment, except about totally unrelated matters; even then, a U.S. representative must be present during the interrogation. Thus, our concerns about the real possibility of an involuntary confession during a custodial interrogation have been substantially alleviated.

In addition, SOFA personnel will be entitled to a pretrial confinement hearing with a lawyer present and will not be confined by the ROK without a judge's determination that confinement is warranted because there is reasonable cause to believe (1) that he/she committed the offense; and (2) that he/she may flee, or (3) that he/she has destroyed or may destroy evidence, or (4) that he/she may cause harm to a victim, witness, or family member of a witness or victim. This is very similar to the due process procedures existing in U.S. law. The accused will also be protected from unfair violations of privacy while in pretrial confinement, especially during staged reenactments of the alleged offense.

In the area of environmental protection, we added an Agreed Minute emphasizing the commitment of both governments to recognize the importance of environmental protection. The U.S. Government agreed to implement the SOFA consistent with the protection of the environment and public health and confirmed its policy to respect relevant ROK environmental laws. The ROK Government confirmed its policy to implement its environmental laws with regard for the health and safety of U.S. personnel. In short, we sought and obtained a mutual and aspirational agreement to protect the environment.

The word "respect" is used intentionally here. The U.S. sees it as a goal to try to operate within relevant ROK environmental laws, as enforced and applied, to the best of its ability and within resource constraints. However, as an equal sovereign, the U.S. is not obligated to comply strictly with each and every ROK law or regulation.

Basically, we all hope to live and work in a better environment. The real problem is that environmental cleanup (or restoration) requires a large commitment of resources. We could not commit to environmental restoration, except to the extent necessary to protect the public health, without the availability of funds. In addition, an agreement to restore the environment fully would be inconsistent with the basic trade-off in Article IV, SOFA. Under Article IV, when the U.S. returns facilities and areas to the ROK Government, the U.S. is not obligated to restore them to their original condition. In turn, the ROK Government is not obligated to compensate the U.S. for any improvements or structures left behind.

In a separate, non-binding "Memorandum of Special Understandings on Environmental Protection," we mutually agreed to cooperate on environmental governing standards (EGS), to share information and to provide for appropriate access to USFK facilities and areas and to consult on risks. In addition, the U.S. Government confirmed its policy to conduct environmental performance assessments and the ROK Government confirmed its policy to respond to outside contamination sources that endanger health. It was also agreed that the Environment Subcommittee and relevant SOFA Subcommittees would meet regularly to discuss environmental issues.

The agreement is considered a statement of principles, similar to that declared by the U.S. and Japan in September 2000, not a binding international agreement. Most of these things are simply standard U.S. policy—things we have long tried hard to do. Our agreements in this area, the Agreed Minute clause and this separate agreement, are designed to be mutual—it is important that both governments do what they can to improve the environment.

The SOFA Joint Committee must still agree on a means to provide "appropriate access" by ROK officials to U.S. facilities. We prefer "joint visits" at our option, rather than "joint inspections," especially on Article III facilities and areas where we

have been granted exclusive use and full control by the ROK Government. We also plan to institutionalize procedures for the rapid notification, response, and remediation of new environmental incidents or spills. We are close to an agreement in these areas. However, while we agreed to remediate new incidents or spills, we did not agree to environmental restoration of existing facilities and areas upon their return to the ROK Government as that would be inconsistent with Article IV, SOFA.

In a significant new agreement affecting preferential hiring of our Korean national employees, it was agreed in exchange for "positive consideration" of applications by family members of military personnel and the civilian component to accept employment on the Korean economy. This does not include dependents of invited contractors. Any of the eight employment status categories (E-1 thru E-8) that previously required a different visa status will be available to our family members as long as they meet the employment requirements for a position under Korean immigration law, whether full or part-time. Family members will not have to give up their SOFA A-3 visa; instead they may be granted permission to work as an additional activity while in Korea on that visa. However, Korean taxes must be paid on any income received.

In another significant agreement affecting criminal jurisdiction, it was agreed that minor traffic offenses resulting in property damage only will no longer be reported as a crime as long as adequate private insurance is maintained as in case of a personally owned vehicle (POV) accident or if the matter can be settled under Article XXIII, Claims, as occurring in the course of official duty. The Claims process will be the "efficient legal remedy" for such accidents, without prejudice to the rights of the victim. In other words, the victim could still file a criminal complaint if not adequately compensated. Dependents are not included because the U.S. Government cannot act as an insurer of last resort under the Claims article for dependents. This should dramatically lower the statistics of so-called "crimes" committed by SOFA personnel.

Also in the labor area, we streamlined and shortened the mediation procedures required under Article XVII, SOFA, before collective labor action or strikes may be taken. We agreed to use the ROK Labor Relations Commission for this purpose, while preserving the right of the Joint Committee to make the final decision on a dispute. We also preserved management's ability to downsize the labor force due to resource constraints or mission changes and agreed that Korean employees would not be terminated without "just cause".

With respect to plant quarantine, we agreed in principle to accept "joint inspections" of animal and plant products brought into Korea to resupply the troops, under procedures yet to be established by the Joint Committee. However, we must retain the ability to bring in fresh fruits and vegetables without undue delay, even those on the ROK banned list. Negotiations continue in the SOFA Animal and Plant Health Inspection Subcommittee.

As you may be aware, one of the greatest threats to readiness in Korea is the denial of access to required training areas due to urban development, the scarcity of arable land for agriculture and farming, and encroachments by private landowners, many of whom have not been fully compensated by the ROK Government for the use of their land by USFK as required by SOFA Article V. To better protect our facilities and areas from encroachment, the ROK Government has agreed to promptly initiate steps toward removing encroachments, including administrative measures acceptable to both sides. The U.S. is permitted to take necessary measures to properly manage and prevent encroachment to the extent possible, with ROK administrative support upon request. We further agreed to jointly survey existing facilities and areas and to provide a better accounting for the use being made of them.

We also agreed to notify and consult with the ROK Government concerning planned modification or removal of indigenous buildings and concerning new construction or alterations that might affect the ability of local communities to provide relevant utilities and services, or may affect the public health and safety. This does not mean a veto, but consultation. Subsequent discussions regarding implementation of this provision indicate that the ROK Ministry of National Defense still insists that USFK should submit building plans to and obtain building permits from local governments, however, that is inconsistent with our agreement to consult at the central government level. We cannot be forced into the position of having to deal with each and every local government. It is the responsibility of the central government to elevate any concerns they may have to the government-to-government level.

We also adopted a new procedure for the service of civil process upon SOFA personnel so that private lawsuits may be more readily settled in Korean courts, similar to that recently agreed in Germany.

Finally, although not legally binding upon the two governments or the Joint Committee, the two chiefs of delegation signed a separate "Record of Discussions" re-

garding Korean access to our Non-Appropriated Fund Organizations (NAFO), our clubs and recreational facilities. The delegation chiefs reconfirmed the U.S. commitment that only qualified persons may use NAFO facilities, recommended that the SOFA Joint Committee conduct a review to determine who may use NAFO facilities, the conditions of that use, and the appropriate means of assuring compliance, and recommended revision of a 25 June 81 agreement regarding "Membership in the USFK Club System" by 31 Dec 2001. (The Joint Committee agreed to take up these tasks on 2 April 2001.)

The delegation chiefs further recommended that the review should determine the appropriate number of Korean members who may participate in USFK clubs; the reasonable and effective measures, including Korean government officials' access to NAFO facilities to monitor the measures taken when formally requested and accorded, to prevent unauthorized use of NAFO facilities; and that it should address the issue of Korean citizen honorary memberships in NAFO golf clubs. The Korean side confirmed that it would permit Korean employees and Korean guests accompanied by USFK personnel to consume food and beverages on the premises of NAFO dining facilities (in other words, the Korean side opposes the concept of unescorted guests). Finally, the delegation chiefs recommended that the 1981 agreement be revised to accommodate these recommendations by 31 Dec 2001. If the Joint Committee is unable to do so, they recommended that the matter be resolved through diplomatic channels.

Overall, we consider these changes to be balanced and positive. They reflect a maturing ROK-U.S. alliance. We are working hard with our ROK ally to implement them in good faith in order to preserve and maintain this great alliance.

PERSONNEL

5. Senator ALLARD. Admiral Blair or General Schwartz, in your written statement you mentioned a concern over a shortage of personnel. Can you handle this within the Defense Department? Do we need an increase in force structure?

General SCHWARTZ. In peacetime, we experience a 90 percent turnover every year. My recommendation would be to increase the number of accompanied tours to Korea and fund infrastructure improvements to make Korea a tour of choice. We need to man the force to meet our requirements, especially in forward deployed/assigned units. We also need to leverage reach back capabilities.

[Deleted.]

Each of these issues can be handled within the Department of Defense.

INTELLIGENCE

6. Senator ALLARD. Admiral Blair, General Pace, and General Schwartz, what is your most significant shortfall in the intelligence and communications infrastructure? Do you have sufficient satellite communications capability? What must we do to ensure we have the capacity and flexibility to support your communications requirements in the next 5 to 10 years?

Admiral BLAIR. Senator, I appreciate you asking me this question. Command, control, communications, computers, and intelligence (C⁴I) shortfalls have been my major concern in U.S. Pacific Command (USPACOM) since I took command. Of particular concern is satellite service for the highly mobile maritime and ground forces and last mile network connectivity for the in-garrison commands. The tyranny of distance, as well as the lack of formal alliances in this theater increases my reliance on tactical satellite communications to support commanders. For example, my Joint Task Force (JTF) Commanders are reliant on video teleconferencing and collaboration to enhance their situational awareness, synchronize missions, and accelerate command and control. This requires large satellite bandwidth. Last mile connectivity to in-garrison forces is just as important, and not to be overlooked. For force protection, I am especially interested in increasing classified network services throughout my AOR. We need to ensure this keeps pace with the rest of the communications infrastructure modernization. It has also become increasingly evident that we need to operate with our coalition partners. In USPACOM, we have an initiative called the Combined Operations Wide Area Network, or COWAN for short. This multi-purpose network will provide transport capability with enough flexibility to protect sensitive information within appropriate communities of interest.

In addition, my Director of Intelligence, Rear Admiral LeVitre, identified shortfalls in intelligence support during her testimony to the House Permanent Select Committee on Intelligence. In the Pacific theater, our intelligence collection, production, and dissemination processes depend heavily on the availability of a reliable,

robust communications infrastructure. Despite major advances in communication technologies, increased availability of high bandwidth transmission across the Pacific Ocean, and decreasing cost of long-haul communications, we are still short of bandwidth on the national networks. The relatively high cost of transoceanic communications in the Pacific theater AOR prevents planners from providing sufficient bandwidth on national network infrastructures, and currently programmed increases in available bandwidth fall far short of low-end requirements identified in past communications studies and surveys. As a result, we face a severe and worsening shortage of accessible communications bandwidth caused by the ever-increasing demand for online and interactive intelligence information in the form of imagery, video conferencing, online collaboration applications, intelligence data bases, Intellink web content, and other forms.

We do not have sufficient satellite communications (SATCOM) capability. Since my theater is vastly separated by water, satellite communications are vital assets that link deployed tactical forces with online, interactive, and responsive intelligence and critical command and control information. Among the deficiencies are:

- (1) lack of readily available high-capacity transmission links;
- (2) limited satellite communications ground stations; and,
- (3) limited availability of high-cost mobile satellite terminals.

We must find better ways of disseminating intelligence to our remotely stationed forces. Though existing programs (e.g., Trojan Spirit II, fielded in the Pacific theater at Joint Task Force commands, and the Global Broadcast System) will lessen the current shortfall, new satellite communications technologies are still needed to meet the ever-growing intelligence requirements at the lowest tactical level.

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USPACOM is a dynamic and challenging theater whose AOR is of vital security interest to the United States. The command and control and intelligence missions are demanding and difficult. To succeed, there must be sustained investment in critical capabilities necessary to support a wide range of military operations in a vast, heterogeneous, and increasingly tense theater. The snapshot view of our communications infrastructure appears insufficient to support USPACOM plans, operations, and associated intelligence requirements. In response to the increasing information requirements, we must continue to invest in communications technology refreshments which improve our ability to manage our vast infrastructure more efficiently, increase remote operations, improve intelligence access to the tactical warfighter, significantly increase available communications bandwidth, and emphasize coalition connectivity and interoperability. We need releasable equipment, accreditation of public key infrastructure/technology that will facilitate virtual private network capability.

[Deleted.]

With the emphasis on unmanned vehicles, I see a great potential for putting communications relay packages on platforms such as Global Hawk to improve our capacity when there is an emergent requirement. However, equipment that use satellite services should evolve their usage to new formats that leverage satellite channel capacity. We have been successful in encouraging the use of demand assigned multiple access circuits, however there are still systems that demand the full [deleted] channel and unfortunately we have not always been able to support their missions.

General PACE. [Deleted.]

Our most significant shortfall in communications infrastructure is the lack of access to the Defense Information Systems Network (DISN). This shortfall impacts our ability to provide voice, data, and video to U.S. forces deployed throughout our AOR. Currently, we rely on commercial satellite services procured by the State Department's Diplomatic Telecommunications Service Program Office to provide limited voice, data, and video capabilities. We are partnering with Defense Information Systems Agency (DISA) to extend the DISN into the SOUTHCOM AOR. This initiative will provide us a faster, more reliable, cost effective, and robust communications infrastructure.

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We must continue to pursue new capabilities and systems that provide reliable and flexible communications services. Sustained support for promising initiatives, like the Advanced MILSATCOM Program, which is designed to satisfy military requirements for assured access, survivability, and flexible mobile-netted communications, will help us alleviate current shortfalls in meeting our most critical communications requirements.

General SCHWARTZ. USFK's most significant intelligence infrastructure shortfall is [deleted]. We have received unprogrammed, single year "plus-ups," however, the money has been limited to current year dollars without sustainment. [Deleted.]

Funding constraints have prevented multiyear planning, adequate staffing, and the timely introduction of emerging technologies. In fact, every year we maintain the status quo, we actually regress because we cannot keep pace with the rest of the [deleted].

No, I do not have sufficient satellite communications capability.

[Deleted.]

QUESTIONS SUBMITTED BY SENATOR SUSAN COLLINS

CHINA AND TAIWAN

7. Senator COLLINS. Admiral Blair, the recent rhetoric between China and Taiwan seems to be at a high level. Can you further define the recent patterns of activity by China? Is the activity within normal limits or are you seeing signs of a major exercise or major operation?

Admiral BLAIR. The People's Republic of China (PRC) appears to have adopted a more active forward defense of land and sea borders. People's Liberation Army (PLA) forces have identified operational weaknesses and are incrementally addressing them as they slowly transition to a more modern force. This modernization is important to the PLA not only in a Taiwan scenario, but also for any regional conflict involving the PRC. As a result, we are beginning to see the results of this modernization effort. Increased training levels and modernization make the execution of military options easier; however, there is no evidence to suggest that ongoing activity is in preparation for any near term specific military operation.

CHINA'S MISSILE TECHNOLOGY EXPORTS

8. Senator COLLINS. Admiral Blair, China has increased its exports of missile technology in recent years to Pakistan, Iran, North Korea, and Libya and now must be watched "carefully" to see if China's communist leaders abide by the terms of a non-assistance pledge they made last November. Do you have additional comments on China's missile technology exports?

Admiral BLAIR. [Deleted.]

TAIWAN ARMS SALES

9. Senator COLLINS. Admiral Blair, China has recently launched a diplomatic offensive aimed at preventing the high-tech arms sales to Taiwan. Among other items, Taiwan has requested to buy four *Arleigh Burke* class destroyers. Understanding that there is a delicate balance to strike between supporting Taiwan's self-defense capability and maintaining relations with China, I am of the mind that the sale of these destroyers would meet the U.S. legal obligation to assist Taiwan in maintaining a self-defense capability in accordance with the Taiwan Relations Act of 1979. I would be interested in hearing your opinion on Taiwan's need for these systems and the pros and cons associated with the sale of these destroyers.

Admiral BLAIR. [Deleted.]

HUMAN RIGHTS STATUS

10. Senator COLLINS. General Pace, what is the status of human rights in the AOR? What is the status of human rights in Colombia?

General PACE. I consider human rights to be a developing success story in the USSOUTHCOM AOR. Most of the nations in the AOR continue to implement legislation and create institutions to protect the human rights of their citizens. For example, the Dominican Republic established a school to teach human rights to their military troops, Colombia established an equivalent of our Staff Judge Advocate Corps, and virtually all the nations in the region cooperatively developed a human rights consensus document to establish standards of conduct, measures of effectiveness, and training criteria for military and police forces. While there is still much to be done, I am optimistic the nations in the region are addressing this important issue seriously.

Colombia has the most visible ongoing human rights challenges and the most aggressive human rights program. We believe the Colombian government and, in par-

ticular, the Colombian military have made significant progress in their efforts to curtail human rights abuses. During the late 1980s and early 1990s, about 60 percent of all reported accusations of human rights abuses were made against the Colombian military. Last year, the number attributable to the military fell to less than 2 percent of all accusations. This progress is a direct result of leadership at the highest levels of the Colombian military taking an active role in changing the culture of their institution by educating their forces on human rights standards, establishing a staff judge advocate school to train their lawyers, establishing Rules of Engagement for the troops, investigating allegations, and dismissing those found guilty of committing human rights violations or collusion with the illegal self defense forces. Last year the Colombian military under the direction of Minister of Defense Ramirez dismissed 388 officers suspected of human rights violations. The recent appointment of Gustavo Bell as the nation's Minister of Defense is another sign of the Colombian government's and military's commitment to institutionalize human rights standards and practices into everyday operations. Mr. Bell has been President Pastrana's point man for human rights reforms during the latter's administration and a strong advocate of change and evolution in the area of human rights. Mr. Bell's appointment as Minister of Defense serves to reinforce the Colombian government's commitment to human rights and should continue to build upon the significant progress demonstrated by Colombia in recent years.

OPERATIONS IN SOUTHERN COLOMBIA

11. Senator COLLINS. General Pace, what is the status of operations in southern Colombia, including the program to purchase UH-60s and UH-1H IIs for Colombia? What are the anticipated regional impacts and threat assessment as a result of implementation of military aspects of *Plan Colombia*?

General PACE. [Deleted.]

The Department of State International Narcotics and Law Enforcement (DoS/INL) has contracted with Sikorsky Aircraft Corporation for the procurement and delivery of 14 UH-60Ls. The first UH-60 aircraft are projected to arrive in Colombia in July 2001. All 14 aircraft should be in Colombia by December 2001. DoS/INL is negotiating with Bell Helicopter Textron Incorporated for the procurement and delivery of 20 Huey IIs. The first Huey II aircraft is expected to arrive in Colombia by January 2002. All 20 Huey II aircraft are projected to be in Colombia by June 2002.

The drug trafficking organizations have shown considerable skill in adapting their manufacturing procedures, production locations, transportation routes, and markets in response to interdiction efforts. That said, [deleted].

MISSILE PROLIFERATION

12. Senator COLLINS. General Schwartz, recent reports indicate that North Korea has been a key source of missile-related technology, expertise, and equipment for the Iranians since the early 1990s. Due to extensive equipment and technical assistance from North Korea, Iran now can produce Scud missiles. Which technologies do you suspect North Korea is providing to our other key adversaries and what regions do you believe are seeking these technologies? What more can or should we be doing to prevent this proliferation?

General SCHWARTZ. [Deleted.]

AGREED FRAMEWORK

13. Senator COLLINS. General Schwartz, in October 1994, the U.S. and North Korea entered into the Agreed Framework in an effort to control the potential development of nuclear weapons by North Korea. The heart of the Agreed Framework and the amending accords is a deal under which the United States will provide North Korea with a package of nuclear, energy, economic, and diplomatic benefits, in return North Korea will halt the operations and infrastructure of its nuclear program. What is your view on the extent to which the Framework's objectives have been satisfied thus far? What is your view on the prospect for ultimate success of the agreement?

General SCHWARTZ. We should measure the Agreed Framework against our non-proliferation objectives. The DPRK made two very significant nonproliferation agreements beyond the freezing of the facilities at Yongbyon and the canning of the known fuel rods. First, the DPRK agreed to permit at the conclusion of the light water reactor (LWR) supply contract ad hoc and routine inspections by the International Atomic Energy Agency (IAEA) of facilities not subject to the freeze. Second,

the DPRK agreed to come into full compliance with IAEA Safeguards Agreement before completion of the LWR project.

Although the DPRK has, for the most part, lived up to the letter of the Agreed Framework and the agreement has achieved the near term objective of shutting down the Yongbyon facilities, implementation of the Agreed Framework is incomplete. To date these graphite moderated reactors remain frozen, and all known intact rods are canned, and under IAEA seal. For the LWRs to become operational the DPRK must be in full compliance with IAEA safeguards. No indication exists that North Korea is ready to accept the prerequisite level of transparency. Unfortunately, the potential and promise of the Agreed Framework have not yet been fully realized and the DPRK's long-term intentions are not clear.

[Deleted.]

INFRASTRUCTURE AND QUALITY OF LIFE

14. Senator COLLINS. General Schwartz, infrastructure and quality of life have been bill payers for readiness for a long time. However, despite this fact, the morale and dedication of our service men and woman are extraordinary. In your professional opinion, what steps can we take this year to make strides in attaining a balanced approach to ensure good training, good quality of life, and good infrastructure for our troops?

General SCHWARTZ. Achieving our vision and accomplishing our missions require us to prioritize scarce resources. To do this, we apply the concept of balanced readiness. Balanced readiness blends combat readiness—our ability to “fight tonight”—with the categories of quality of life for servicemembers and their families, and the condition of the infrastructure. In fact, in terms of prioritizing military construction resources today, the quality of life and infrastructure categories of my balanced readiness concept are the most important. Our military construction (MILCON) command priorities, then, fall into three categories: (1) War Fighting Readiness, (2) Infrastructure, and (3) Quality of Life. My immediate concerns right now are quality of life issues.

A Korean assignment today involves some of the poorest living and working conditions of any permanent change of station assignment in the military. Even with the great assistance we received from Congress last year, \$138 million for quality of life construction, we continue to face grim conditions throughout this command. We cannot sacrifice cuts in one category to provide for in another category. My goal is to make a Korean assignment comparable to other Outside Continental United States (OCONUS) assignments. To do this we need the continued support of Congress.

Over 50 percent of the servicemembers in U.S. Forces Korea live in inadequate quarters. These quarters are inadequately maintained due to lack of funding and are inadequate in terms of size. Quarters in Korea are very small and become very cramped when furnished to American standards. Overcrowded facilities force us to billet many unaccompanied personnel off-post in dense urban areas, creating force protection concerns. This practice not only increases their personal risk, it also imposes a high financial burden in terms of out of pocket, cost of living expenses.

Family housing throughout the peninsula is inadequate as well. As with the barracks, the family housing on and off post in Korea is very small and becomes very cramped when furnished to American standards. Much of the housing in Korea is over 25 years old and many of the units have never been renovated. Only 9 percent of the Command serves an accompanied tour due to the lack of available housing on post. This continuous rotation of personnel every year has a dramatic impact on all services in Korea and seriously impacts force readiness for U.S. Forces Korea. Historically, funding for housing in Korea has been minimal. Since 1959, only \$43 million has been targeted for family housing. We require \$49 million, per year, over the next 10 years to match our host nation funded construction housing effort.

Many of our soldiers along the Demilitarized Zone (DMZ) are still living and working in overcrowded and substandard Quonset and H-relocatable barracks that do not provide the minimum net square footage required by current Army standards. These substandard facilities have gang latrines and deteriorated heating systems, do not provide adequate security for soldiers' personal and military issue items, waste energy and are becoming structurally unsound.

Furthermore, we cannot renovate these substandard barracks to meet current standards. These substandard conditions have a significant negative impact on the health, morale, and mission readiness of the soldiers and units they serve. We need 28 new UOQs at a cost of \$49 million per year over the next 10 years.

We presently have 20 physical fitness centers that need to be replaced at a cost of \$15 million per year over the next 10 years. We have 12 dining facilities that

need immediate replacement at a cost of \$14 million per year over the next 10 years. Replacing these unsatisfactory buildings will have an immediate effect on improving the quality of life for our servicemembers.

We desperately need to execute a comprehensive construction program and begin to eliminate the unacceptable living and working conditions in aging facilities that U.S. forces in Korea face every day. Last year we received \$76 million.

Substandard infrastructure, living, and working conditions are not limited to the soldiers at the DMZ, but also exist at other Army, Air Force, and Navy installations throughout the Korean peninsula. The problems continue to grow worse. Chronic under-funding of sustainment, restoration, and modernization (SRM) funding for Korea during the past 15 years and the interruption of MILCON dollars for our command between 1991 and 1994 has limited our ability to give our servicemembers that quality of life they deserve. Aging facilities are also more costly to maintain.

The extent of our water and electricity problem is best illustrated by the fact that in 1999 and 2000 alone, the command suffered 437 electrical power and 515 water supply outages from decaying infrastructure. Currently, we can only afford emergency repairs, which is more costly in the long term than having a preventive maintenance program.

Additionally, we are currently in the process of upgrading and improving sewer and water disposal systems in many of our installations and require support to complete these projects. To repair and upgrade these systems we require \$29 million per year for 10 years for water, \$60 million per year for 10 years for electric, and \$61 million per year for 10 years for sewers. In fiscal year 2002, we anticipate \$83.4 million in fiscal year 2002 for real property maintenance. This funding will allow us to keep the doors open to our facilities and make emergency repairs only. It leaves us \$194.0 million short of our total requirement of \$274.4 million, which would allow the command to provide quality facilities and accomplish the routine maintenance required on a day-to-day basis. Thirty percent of all buildings in the command are between 40 and 80 years old and 32 percent are classified as temporary buildings.

Being good stewards of the environment in our host country is important to our mission and the alliance, and a major subset of the infrastructure category. We have accomplished much but there is more we will do. Future problem mitigation and environmental protection requires continuous funding from both the Republic of Korea and U.S. We need an additional \$43.6 million in the environmental operations and maintenance accounts for fiscal year 2002 and approximately \$15 million in MILCON per year over the next 10 years for compliance cleanup, pollution prevention, wastewater treatment facilities, and conservation. Our investment in protecting the Korean environment is the responsible course of action that serves to strengthen our alliance.

I want to emphasize that the support of Congress and the American people is vitally important to our future in Korea. We thank you for all you have done. Your MILCON support since 1995 has allowed us to upgrade or replace 126 facilities. We have an investment of over 50 years in this region, but we cannot continue this investment 1 year at a time. The U.S. forces in Korea require a continued investment in basic readiness and quality of life.

READINESS ASSESSMENT

15. Senator COLLINS. Admiral Blair, General Schwartz, and General Pace, recently, a senior officer expressed his concern to me that our current spending pattern is to rob our modernization account to pay for pressing readiness problems. He also described a disturbing pattern in which the Clinton administration deliberately under funded readiness accounts with the expectation of a supplemental fix for these pressing issues. While you have each addressed readiness issues separately in your testimony, what is your overall assessment of your respective command's readiness?

Admiral BLAIR. As previously mentioned in my written testimony, the forces in U.S. Pacific Command (USPACOM) are fully ready to execute any assigned mission. We continue to have no reservation about our ability to do our job today, but do have doubts about our ability to do so in the future unless we make progress in addressing structural readiness issues.

Overall, the warfighting capabilities of U.S. Armed Forces have leveled out after recent declines, but there are many critical readiness areas that continue to cause concern. My issues are focused in eight areas: people; operations and maintenance funding; mobility infrastructure; sustainment restoration, and modernization; housing; Army prepositioned stocks; preferred munitions; and medical support.

People. Readiness starts with people. First, I would like to express the appreciation of the men and women of the USPACOM for the pay and compensation measures taken this past year. I strongly applaud the funding in the fiscal year 2000 budget for a base pay increase, elimination of the REDUX retirement system, return to 50 percent base pay after 20 years of service, and pay table reform that rewards achievement more than longevity. These actions demonstrate the interest of our Nation in equitably and fairly compensating the men and women of the Armed Forces both on active duty and in retirement. I also very much endorse Congress's commitment to keep pay raises above the Employment Cost Index for the next several years to continue to ensure competitive compensation.

Pay and retirement are not the only areas of concern. To attract and retain highly motivated, qualified people, we must continue to emphasize quality medical care, education, and housing while providing the opportunity to live in a secure and safe environment. We must increase our efforts to pursue improvements in TRICARE so customer satisfaction, particularly at military treatment facilities, meets the national standard. This is critical to taking care of our personnel and families. I appreciate the ongoing efforts in the area of dependent education; however, I must emphasize we need to continue our efforts so educational standards in Department of Defense schools offer programs and services that meet or exceed the national average. We should be especially attentive to revitalizing all housing assets. Current funding gaps and delays in privatization have endangered our goal to fix the housing problems by 2010.

Operations and Maintenance Funding. The next most important component of readiness is funding for operations and maintenance. These funds provide spare parts, fuel for aircraft, ships, and tanks, funds to train, and upkeep for our bases. Here the news is not positive. The Pacific component commands gained only marginally from fiscal year 1999 and 2000 Emergency/Readiness Supplemental Appropriations. Further, the funds provided were only sufficient to prevent further declines in readiness rather than assist in any measurable increase. Accordingly, the readiness of our component commands is not expected to reflect any significant increase this fiscal year from supplemental funding. Forward deployed forces and forces deploying to contingencies are at a high state of readiness. Non-deployed and rear area forces are at lower readiness. Camps, posts, and stations continue to deteriorate.

Mobility Infrastructure. Of particular concern is the transportation infrastructure required to deploy forces across the Pacific in support of conflict in Korea or other operations. The problem centers on aging fuel systems in Alaska, Hawaii, Guam, and Japan, specifically, fuel hydrant distribution systems and storage tanks, which in many cases are nearly 50 years old and nearing the end of their useful service life. These existing systems are not only very costly to maintain, but their age reduces our capacity to speed strategic airlift across the Pacific. The continued appropriation of resources is absolutely essential to maintain this upward trend and complete the necessary repairs of our aging mobility infrastructure.

Sustainment, Restoration, and Modernization (SRM). SRM is showing the combined effects of aging facilities and cumulative underfunding. The result is a maintenance backlog that will continue to grow unless the Services can program more funds. These programs must reflect a commitment to having first-rate facilities that are on a par with the quality of our people and weapons systems. Our components require approximately \$3.6 billion over the next 5 years to fix this backlog. This amount is above what is needed to maintain the status quo on our bases and infrastructure. The shortfall in SRM affects readiness, quality of life, retention, and force protection, and can no longer be ignored. Our people deserve to live and work in first-class buildings. We have not yet reached this standard.

Housing. Safe, adequate, well-maintained housing remains one of my top quality of life concerns. In the Pacific area of responsibility, the latest assessment shows military family housing (MFP) units totaled 79,471, with shortfalls of over 11,000 on the west coast and Hawaii, 4,000 in Japan, and 2,650 in Korea. We are working hard to correct the housing problems with projects ranging from whole barracks renewals at Fort Richardson, Alaska, and Schofield Barracks, Hawaii, to new family housing at Pearl Harbor and Kaneohe Bay, Hawaii. However, much more remains to be done and I need your continued support for these very important programs which are vital to retaining the quality people that are the cornerstone of our military strength.

Army Prepositioned Stocks. A key logistics and sustainment shortfall remains the Army Prepositioned Stocks 4 (APS-4) Brigade Set located in Korea. Army heavy forces deploying to fight on the Korean peninsula would fall in on this equipment. Although we are happy with the status of the Brigade Set, crucial shortages exist in sustainment stocks that impact our ability to replace combat losses. I fully sup-

port CINCUNC/CFC's requirement to have this set of equipment become a Korean version of the capability that exists in Kuwait to support Central Command.

Preferred Munitions. Another logistics shortfall in USPACOM is preferred munitions. Operations in Kosovo severely depleted worldwide stocks of Navy and Air Force precision guided munitions, including many types designated in our plans for use in Korea. Although Service programs have received supplemental funding that will alleviate some of the shortfalls over time, critical shortages exist now. Theater plans can still be executed successfully, but only by substituting less effective munitions early in the conflict. The result is additional high-risk sorties by combat crews, a longer conflict, and higher casualties.

Medical Support. Finally, we may be accepting some risk in the area of medical support. Although funding has been programmed to meet prepositioned medical supply shortfalls, and a test will be made of the shortages of prepositioned medical supplies, an initial shortfall in the number of hospital beds, the movement of additional hospitals and personnel from continental U.S.-based hospital facilities, and the untested ability of the industrial base and medical logistics programs to support massive deployment and initial in-theater requirements, makes our ability to provide adequate force health protection uncertain.

In summary, USPACOM can do the job today. However, we need continued investments to attract and retain quality personnel, maintain both our equipment and facilities, build stocks of the most modern munitions and equipment needed to sustain combat operations most effectively, and provide medical support during a major theater war.

General SCHWARTZ. As I report in my Joint Monthly Readiness Review (JMRR), all CFC units are prepared to execute their wartime mission. However, we have some significant deficiencies that are reported in great detail to the Joint Staff. [Deleted.] While there have been only minor changes to the readiness issues reported in the JMRR, CFC believes there is [deleted].

General PACE. There are shortfalls within our units. With one exception, none of the shortfalls significantly impact our ability to accomplish assigned missions. [Deleted.]

QUESTIONS SUBMITTED BY SENATOR MARY L. LANDRIEU

PLAN COLOMBIA AND NARCO-TERRORISM

16. Senator LANDRIEU. General Pace, last year I followed the debates over *Plan Colombia*, our approach to the problem of narco-terrorism in South America, and the issues surrounding counter-narcotics efforts with great interest. I am concerned, however, that *Plan Colombia* was significantly watered down. I believe its focus on Colombia risks simply pushing drug producers, processors, smugglers, and possibly the rebels themselves across the borders into the neighboring countries of Venezuela, Brazil, Peru, and Ecuador. This would just exacerbate the problem and turn Colombia's problem into a regional one. Do you agree with this assessment and, if so, what changes would you recommend to make *Plan Colombia* more effective throughout your AOR?

General PACE. While various elements of the drug trafficking business already impact virtually all nations in the region, I agree with your assessment that a successfully executed *Plan Colombia* increases the risk of pushing drug producers, processors, and smugglers across the borders into neighboring countries. Due to the potentially lucrative profits of the narco-trafficking business, I fully expect drug trafficking organizations (DTOs) to employ every measure possible, including migration of their activities across Colombian borders, to continue their operations. Fortunately, no major change of direction is required in planned U.S. support for Colombia and its neighbors. The Department of State-led U.S. Government interagency effort supporting *Plan Colombia* anticipated this DTO reaction and is already coordinating the regional response required to contain spillover. A substantial percentage of both the fiscal year 2001 Emergency Supplemental and the proposed fiscal year 2002 Andean Regional Initiative (ARI) provide funds to develop bordering country capabilities specifically designed to address this problem. USSOUTHCOM, through the Department of Defense, is actively supporting this Department of State-led effort.

COLOMBIAN REBELS

17. Senator LANDRIEU. General Pace, just last week, the U.S. Ambassador to Colombia, Anne Patterson, endorsed a proposal to grant Colombia's second-largest

rebel group a demilitarized enclave to help revive suspended peace talks. This proposal, part of President Andres Pastrana's land-for-peace policy, would hand over a territory in northern Colombia to the 5,000-member National Liberation Army with all government troops and police leaving the zone. Based purely on your military expertise, what is your assessment of the Colombian military's ability to execute *Plan Colombia* and deal with these rebels?

General PACE. [Deleted.]

READINESS AND CURRENT OPERATIONS

18. Senator LANDRIEU. Admiral Blair, General Pace, and General Schwartz, last week this committee was briefed by Generals Ralston and Franks on the status of their AORs. Like them, you have provided superb prepared statements which address your engagement plans and needs. I have a few follow-up questions:

JSTARS. The Air Force reports that JSTARS platforms and air crews are severely burdened due to CINCs' requirements—particularly in the EUCOM and CENTCOM AORs. For the past 3 years Congress has added funds to continue procurement of the JSTARS aircraft moving the fleet size toward the Joint Requirements Oversight Council (JROC) requirement of 19. I would like you to give your views on the importance of that system to your AOR, your war plans, and if you have been constrained due to lack of assets.

Force Reductions. Given the fact that our forward-deployed forces in Korea serve mainly as a "tripwire" and source of deterrence, do you see any room for reductions in those forces in the near future?

Burden-sharing. With regards to the renegotiation of the Special Measures Agreement, what is the status of those negotiations and what are your expectations as to increase South Korean support of the financial costs associated with the facilities and forces we base there?

Admiral BLAIR. Moving Target Indicator (MTI) coverage over the Korean Peninsula is a [deleted]. JSTARS is invaluable in providing deep-look MTI especially in light of ongoing [deleted]. The aircraft, however, is allocated to the Pacific theater [deleted] JSTARS support to the theater is required. During a conflict, JSTARS will play a critical role in providing MTI coverage of enemy activities. [Deleted.] This is expected to increase in subsequent re-writes of the OPLANS as more JSTARS aircraft and trained aircrew come on-line. [Deleted.]

General PACE. [Deleted.]

General SCHWARTZ. [Deleted.]

No. The strength of our alliance with the Republic of Korea (ROK) is our presence. The ROK soldiers, sailors, airmen, and marines defend the Republic everyday. They defend the majority of the Demilitarized Zone forward of most USFK forces. Northeast Asia will remain vital in both strategic and tactical terms. Our presence demonstrates our commitment to regional partners and provides credible and practical contribution to regional stability and security. Continued access to Northeast Asia will be critical to respond to future contingencies/crises. Regional presence enables us to respond more rapidly and flexibly. Many variables will determine the shape and size of our presence such as the nature of regional security situation and the national interest of our host nation and perceived threats to those interests. However the U.S. will have national interests in the region well into the future.

Ambassador Marisa Lino, Senior Advisor to the Assistant Secretary of State for Political-Military Affairs, led the U.S. delegation in the first round of the 2001 Special Measures Agreement (SMA) negotiations with the Republic of Korea's Government (ROKG) on 29–30 March in Seoul. The U.S. proposed a multi-year agreement, within the current SMA structure, with a baseline contribution of USD 584 million for 2002. Ambassador Lino further proposed that contributions for future years should be calculated with a growth equation based upon the previous year's inflation rate, GDP growth, and a fixed escalator clause to ensure that the overall ROK contributions reflect an increasing percentage of USFK non-personnel stationing costs and fair consideration of the ROK's economic situation. The ROKG SMA representatives during the initial meeting in March and during three subsequent working level meetings lead by the U.S. Embassy expressed concerns about our assessment of their ability to pay, evaluation of contributions outside of the SMA, commitment to a multi-year agreement, and overall fairness.

Despite the gaps in our initial positions, we fully anticipate a new Special Measures Agreement, which results in fair, real, and meaningful growth in the Republic of Korea's contribution to the payment of USFK's non-personnel stationing costs.

PEACE NEGOTIATIONS

19. Senator LANDRIEU. Admiral Blair and General Schwartz, in your opening statements you both allude to the fact that, while the last year has seen breathtaking developments in North Korea's relationship with the South and the rest of the world, their training cycle last winter and over the summer was robust and you evaluate their military as "bigger, better, closer, and deadlier" than when you briefed this committee last year. At the same time, the North Korean economy is a shambles and most experts agree that the country is breaking down—the only question is whether it will explode or implode. Recently, the President has expressed skepticism about ongoing peace negotiations between North and South Korea and decided to postpone talks with the North. Just last Friday, European Union leaders announced they would dispatch their own team of mediators to try and jump-start the talks. What is your assessment of the ongoing peace negotiations and what impact do you believe the EU's actions will have on the process?

Admiral BLAIR. President Bush's 6 June policy announcement on North Korea has changed the dynamics of the issue significantly. At this time, our State Department and its peers in the Republic of Korea (ROK) and other nations have the lead in the diplomatic campaign to convince North Korea to move from rogue state to becoming a more normal member of the international community—with all the benefits and responsibilities that entails. As a military leader, I am concerned Kim Jong-Il continues to devote scarce resources to maintaining a large conventional military force that threatens regional peace and prosperity. I certainly support the multilateral efforts to reduce that threat and hold North Korea responsible for adhering to international norms.

General SCHWARTZ. The historic meeting between President Kim Dae-Jung and Chairman Kim Jong-Il initiated a great deal of diplomatic activity on the Korean peninsula which touched off a wave of reconciliation euphoria in South Korea and generated the public perception that peace was just around the corner. As I noted in my statement, the initial pace of diplomatic activity in the summer and fall of 2000 was indeed staggering. North Korea, however, is not a predictable and reliable partner for the ROK. The North Koreans have repeatedly stalled the promised follow-on to the first ever meeting of defense ministers in September 2001. North Korea has yet to implement any meaningful military confidence building measures (CBM). A detailed agreement, which could have served as a model CBM, on the construction of the Seoul-Sinuiju transportation corridor remains unsigned. Meetings at the ministerial-level sponsored by the ROK Unification Ministry on a wide range of non-military issues have yet to yield concrete results. This spring North Korea abruptly cancelled an April Red Cross meeting and a March ministerial-level meeting. The promised and long anticipated follow-on summit between the leaders of North and South Korea is not yet scheduled. While it is encouraging that Kim Jong-Il promised to extend the moratorium on missile testing into 2003 the recent threat to abrogate the Agreement Framework is a more typical example of their unpredictable behavior. While North Korea's greatly expanded diplomatic contacts, to included the European Union, provide the opportunity from the DPRK leadership to hear from a variety of sources about the requirements for predictable and reliable international behavior, these contacts have not fundamentally changed the DPRK's erratic behavior and the reconciliation process is stalled.

MISSILE THREAT

20. Senator LANDRIEU. General Schwartz, the ongoing debates on national and theater ballistic missile defense as well as concerns about threat assessments and the Rumsfeld Commission's report continue to highlight the danger ballistic missiles pose to regional and world stability. What is your military assessment of the North Korean missile program and the threat it poses to our forces in the Pacific as well as Hawaii and the Continental United States?

General SCHWARTZ. [Deleted.]

TAIWAN ARMS SALES

21. Senator LANDRIEU. Admiral Blair, just last week President Jiang Zemin told American reporters: "We absolutely oppose the sale of advanced weapons by the United States to Taiwan. If the United States were to sell advanced weapons to Taiwan such as the Aegis system, that would be very detrimental to China-U.S. relations." At the same time, China continues to deploy increasingly more sophisticated missile batteries in the Fujian province (about 100 miles from Taiwan) to threaten

leaders on the island. Given your expertise on Sino-American relations and the security environment in your theater, what is your recommendation on the sale of advanced technology systems, including the Aegis weapons system, to Taiwan?

Admiral BLAIR. [Deleted.]

CHINESE THREAT

22. Senator LANDRIEU. Admiral Blair, a source of great debate in Washington these days is the strategic review Secretary Rumsfeld is conducting at the Pentagon to determine what our strategy should be in the coming years. Andrew Marshall is on record as saying he believes China represents the true threat the United States will face in the 21st century. What is your assessment of the Chinese threat and what advice would you give this committee on how to deal with it?

Admiral BLAIR. [Deleted.]

Our engagement tempo and range of activities with China may vary over time, but it is important to keep a consistent approach that promotes cooperation, fosters constructive regional agreements, and deters intimidation or the use of force.

RESTRICTIONS ON MILITARY INTERACTION

23. Senator LANDRIEU. Admiral Blair, in your prepared statement you allude to restrictions on your ability to interact with 14 of the 43 nations in the region and question the validity of some of those restrictions. What restrictions do you believe should be removed or modified to enhance your ability to execute your regional engagement strategy? Are any of those restrictions mandated by Congress or are they imposed by the administration and/or DOD?

Admiral BLAIR. U.S. Pacific Command currently is restricted in some manner in its interactions with 14 of the 43 nations in the region. If we are to maintain our relationships and ability to influence throughout the AOR we must seek to propel inevitable changes in Asia in directions we deem desirable. Inflexible restrictions that impose broad penalties in the short-term may ultimately damage our overall long-term strategic interests.

While I do not support a reward to "bad actors," suspension of all Military-to-Military (Mil-to-Mil) contact activities eliminates the opportunity for dialogue and the opportunity for positive influence by the U.S. When Mil-to-Mil contact is totally suspended, no shaping can occur.

I favor a baseline activity level that we would sustain with all nations. All nations would generally be entitled to attend international multilateral conferences, senior service schools, and institutions such as the Asia-Pacific Center for Security Studies (APCSS). I believe that it is to our benefit to expose officers and other officials even of nations like Burma, Comoros, and North Korea, to democratic ideals and international norms.

Expansion of Mil-to-Mil contact above the baseline would include foreign military sales (FMS)/foreign military financing, port visits, military training, and exercises. If a nation severely regresses in its reform efforts or violates international norms, then discretionary activities are rolled back in proportion to the severity of the event.

For example, under such a Mil-to-Mil baseline policy, Indonesia would benefit from continual exposure to democratic ideals and international norms. It is in the U.S. interest to influence Indonesian armed forces (TNI) to adopt such ideals and norms. Yet, since international military education and training was discontinued in 1991, few Indonesian officers have been exposed to the U.S. Armed Forces. Conversely, we are limited in our ability to influence developments due to the scarce number of contacts developed.

Positive reforms by TNI could result in increased activities, ranging from FMS cases like C-130 spare parts and F-16 aircraft, to port visits, military training, and exercises. Regression in the TNI reform effort would lead to a proportional rollback in discretionary activities. Regardless of progress or regression, however, I believe there should remain a place for Mil-to-Mil contact to provide long-term opportunities for dialogue and positive influence.

Current restrictions include: New Zealand, Indonesia, North Korea, Taiwan, Vietnam, Burma, Cambodia, Fiji, Laos, Mongolia, China, Comoros, India, and Russia.

JAPAN

24. Senator LANDRIEU. Admiral Blair, you have spoken about our relationship with Japan and the sensitivity of negotiations on the 5-year Special Measures

Agreement (SMA) as well as issues concerning various bases in Japan. In your opinion, what impact will the U.S.S. *Greeneville's* sinking of the *Ehime Maru* have on those negotiations and our security relationship? Based on your experience as a naval officer, what is your opinion about the calls to raise the *Ehime Maru*?

Admiral BLAIR. The new 5-year SMA was ratified by the Japanese Diet in November 2000 and went into effect on 1 April 2001, before the U.S.S. *Greeneville's* collision with the *Ehime Maru*. I believe the U.S. and Japan have a strong bilateral relationship whose enduring strength has benefited both sides for close to half a century. I believe we will be able to move forward from this tragedy in the interests of both nations and our peoples. I fully support ongoing efforts to raise the *Ehime Maru*. Recovery operations at this depth, though technically feasible, will be challenging. We are committed to using the best capabilities in the world. When salvage operations begin later this summer, the U.S. Navy and the Japan Maritime Self Defense Force will do everything possible to recover the remains of the missing crewmembers.

[Whereupon, at 12:00 p.m., the committee was recessed, to reconvene in closed session.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2002

THURSDAY, JUNE 28, 2001

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

MILITARY POSTURE/BUDGET AMENDMENT

The committee met, pursuant to notice, at 2:31 p.m. in room SD-106, Dirksen Senate Office Building, Senator Carl Levin (chairman) presiding.

Committee members present: Senators Levin, Lieberman, Cleland, Landrieu, Reed, Akaka, Bill Nelson, E. Benjamin Nelson, Carnahan, Dayton, Warner, McCain, Inhofe, Santorum, Roberts, Allard, Hutchinson, Sessions, and Collins.

Committee staff members present: David S. Lyles, staff director; Anita R. Raiford, deputy chief clerk; Madelyn R. Creedon, counsel; Richard D. DeBobes, counsel; Gerald J. Leeling, counsel; and Peter K. Levine, general counsel.

Professional staff members present: Daniel J. Cox, Jr., Evelyn N. Farkas, Richard W. Fieldhouse, Creighton Greene, Michael J. McCord, and Terence P. Szuplat.

Minority staff members present: Romie L. Brownlee, Republican staff director; L. David Cherington, minority counsel; Ann M. Mittermeyer, minority counsel; Suzanne K.L. Ross, research assistant; Scott W. Stucky, minority counsel; and Richard F. Walsh, minority counsel.

Professional staff members present: Charles W. Alsup, Edward H. Edens IV, Brian R. Green, William C. Greenwalt, Gary M. Hall, Mary Alice A. Hayward, Ambrose R. Hock, George W. Lauffer, Patricia L. Lewis, Thomas L. MacKenzie, Joseph T. Sixeas, and Cord A. Sterling.

Staff assistants present: Gabriella Eisen, Thomas C. Moore, and Jennifer L. Naccari.

Committee members' assistants present: Menda S. Fife, assistant to Senator Kennedy; Christina Evans, Barry Gene (B.G.) Wright, and Erik Raven, assistants to Senator Byrd; Frederick M. Downey, assistant to Senator Lieberman; Andrew Vanlandingham, assistant to Senator Cleland; Elizabeth King, assistant to Senator Reed; Davelyn Noelani Kalipi, assistant to Senator Akaka; William K. Sutey, assistant to Senator Bill Nelson; Eric Pierce, assistant to Senator Ben Nelson; Neal Orringer, assistant to Senator Carnahan;

Brady King, assistant to Senator Dayton; Christopher J. Paul, assistant to Senator McCain; Margaret Hemenway, assistant to Senator Smith; John A. Bonsell, assistant to Senator Inhofe; George M. Bernier III, assistant to Senator Santorum; Robert Allen McCurry and James Beauchamp, assistants to Senator Roberts; Douglas Flanders, assistant to Senator Allard; James P. Dohoney, Jr., assistant to Senator Hutchinson; Arch Galloway II, assistant to Senator Sessions; and Kristine Fauser, assistant to Senator Collins.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Chairman LEVIN. The committee will come to order. The committee meets this afternoon to receive testimony from Donald Rumsfeld, Secretary of Defense; General Hugh Shelton, Chairman of the Joint Chiefs of Staff; and Dr. Dov Zakheim, Under Secretary of Defense (Comptroller). We welcome them. They will be testifying this afternoon on the fiscal year 2002 budget amendment. We welcome you all back.

This may be the final time that General Shelton will be appearing before this committee to present his views on a defense budget before his term ends this fall. General Shelton, you have always put one cause above all others, and that is the well-being of America's Armed Forces and their families. History will record you as an outstanding Chairman of the Joint Chiefs of Staff who left the U.S. military more capable than you found it. On behalf of all of us, I want to take this opportunity to express our gratitude for the tremendous service that you have given to this Nation.

Mr. Secretary, we all know there are many reasons why the administration is late in submitting the amended budget request, but as I mentioned in our hearing last week, the administration's delay is forcing Congress to attempt in an 8-week session what typically takes 5 months. It will be an incredibly difficult task.

The men and women of our Armed Forces have a lot at stake in the Fiscal Year 2002 National Defense Authorization Bill, and every member of this committee is committed to working hard to complete action on this bill before the start of the new fiscal year. To do that, the committee needs an actual budget proposal from the Department of Defense. So far, we have received only a budget outline. We need details on specific budget line items, and we need the justification books explaining these line items.

This morning, we received some of the legislative proposals that the Secretary is asking this committee to consider. Mr. Secretary, given the extremely compressed schedule that I mentioned, we have to ask again for all of that information that I have outlined, the specific line items, the justification books, and legislative proposals by next week.

While we have had only 24 hours to review your budget request, certain aspects are beginning to emerge. The fog is still heavy, but it is beginning to lift. There are some positive aspects to the request, such as efforts to build on the improvements in quality of life over the last few years by giving pay raises, reducing service members' out-of-pocket housing costs, and increasing funds for military health care and family housing. However, there are some puzzling aspects of your request as well.

For instance, despite a proposed \$33 billion increase in defense spending over the current fiscal year, spending on procurement would actually decrease next year by \$0.5 billion; despite this \$33 billion increase, funding for basic science and technology also would decrease next year; and despite a \$7.8 billion increase in spending for operations and maintenance, Army flying hours and tank training miles also would decrease.

At the same time, funding for missile defense would increase by \$3 billion, from \$5.3 billion to \$8.3 billion, a 57 percent jump over this year's level. Every line item in the budget involves real choices. It is clear that this budget places a huge increase in missile defense ahead of important programs in modernization, basic research, and training time for Army units.

Earlier this year, many of us in the Senate expressed our concern that the large tax cut sought by the administration would leave little, if any, room for some essential investments, including defense. In fact, during the debate on the budget resolution, Senators Landrieu, Carnahan, and others introduced an amendment to redirect \$100 billion of the tax cut over 10 years to defense, only to have that amendment defeated.

Our Ranking Member, Senator Warner, offered an amendment, which was adopted in the Senate but then later dropped in conference, which also would have added funds for defense.

Under the terms of the budget resolution, the Chairmen of the Budget Committees in the House and Senate will decide if the current level of funding for national defense in the budget resolution should be increased to accommodate your proposed budget amendment. As the Chairman of the Senate Budget Committee mentioned in a letter to the President earlier this week, with the new economic estimate from the Congressional Budget Office due in about a month, it would appear that the \$18.4 billion increase that the administration is requesting for the Defense Department in fiscal year 2002 could lead to dipping into the medicare surplus.

Moreover, the request before us is limited to fiscal year 2002. The Secretary will testify today that an additional \$18 billion increase, totaling \$347 billion, will be required in fiscal year 2003 just to sustain the proposed 2002 budget level on a straight line basis. This could take as much as \$30 billion of medicare funds next year alone without paying for any improvements or providing funding for the transformation of the military to meet new threats, which the Secretary will be proposing in the fiscal year 2003 budget, following the completion of his defense strategy review and the quadrennial defense review.

Our men and women in uniform depend on defense budgets that are sustainable, yet it is increasingly apparent that the funding for any future transformation of our Armed Forces cannot be initiated or sustained without cutting existing defense programs, using the medicare surplus, returning to budget deficits, or cutting important programs such as education, health care, and law enforcement, none of which are acceptable alternatives.

The bottom line is this: the administration's strategy of first laying out a banquet of tax cuts unnecessarily leaves other programs, including our national security programs, in an extremely precarious position. In order to avoid dangerous instability in the defense

budget in the future, the administration needs to address this situation and provide a clear plan for meeting and sustaining our defense needs.

Senator Warner.

STATEMENT OF SENATOR JOHN WARNER

Senator WARNER. Thank you, Mr. Chairman. I join you in welcoming our witnesses.

Mr. Chairman, the Republicans are going to caucus today at 3:00, so I am going to forego my opening statement and place it in the record and give my colleagues who will be attending that conference the opportunity, hopefully, to have some questions before they depart. I certainly join you in the recognition of our distinguished chairman of the Joint Chiefs and his lifetime contribution to freedom and service to this country.

I thank you and your family.

[The prepared statement of Senator Warner follows:]

PREPARED STATEMENT BY SENATOR JOHN WARNER

Thank you, Mr. Chairman, for your leadership in arranging to conduct this most important hearing at the earliest possible date. We both recognize the herculean task we now face in thoroughly reviewing this defense budget request, crafting an authorization bill, and gaining the consent of the full Congress prior to the beginning of fiscal year 2002.

I join Senator Levin in welcoming Secretary Rumsfeld to his first posture hearing since the 1970s. It was a very different world when you last appeared before Congress to discuss the budget request 25 years ago, but the importance of the work we begin today is unchanged.

I want to thank you for the service that you have once again undertaken for your country and for the work you have already begun. I also want to commend you and President Bush for submitting a budget amendment that begins to address the commitment you both made to our service men and women, past and present, to their families, and to all American citizens. As President Bush stated at the Citadel last Fall, we must, "... renew the bond of trust between the American people and the American military; ... defend the American people against missiles and terror; and, ... begin creating the military of the next century."

I also extend a welcome to Gen. Hugh Shelton, Chairman of the Joint Chiefs of Staff, to what will be your last posture hearing—I won't say last appearance before this committee—because as a warrior you know none of us can predict with any certainty what the future may bring.

I do want to extend to you the heartfelt thanks of a grateful Nation for your extraordinary service, which now spans five decades—from 1963 to the present—and includes combat service during two tours of duty in Vietnam and during Operation Desert Storm. As Chairman of the Joint Chiefs, you have been repeatedly called upon to provide sound military advice to our President and to execute military operations across the spectrum of conflict that have been the epitome of precision and military professionalism. We are indebted to you, General Shelton, and salute your service.

We are clearly at a critical juncture in our military history, and in the history of our Nation. We all accept that the United States has assumed a unique leadership role in the world today, especially in the realm of international security. It is easy to feel secure in our sole, superpower status, but as our own Director of Central Intelligence, George Tenet, and many other studies and commissions have repeatedly reminded us, we, as a Nation, are more vulnerable today than ever before in this increasingly interdependent and complex world. Mr. Tenet reaffirmed before this committee in March of this year that threats to our national security continue to increase, as was so tragically demonstrated in the vicious terrorist attack on the U.S.S. *Cole*. The pace of both social and technological change, continues to accelerate, increasing the concerns and the uncertainty we must accept.

Ironically, we find ourselves in a fractious, complex world in the aftermath of communism. The proliferation of weapons of mass destruction and the means to deliver them, as well as the pervasive spread of information technologies, have combined to empower the disaffected of this new world order to increasingly threaten our

shores, interests, and friends. Simply put, we are more vulnerable than ever. Those that would do us harm may not be constrained by conventional norms of conduct or dissuaded by the vague threat of prosecution or retaliation. New concepts and capabilities must be considered to strengthen our deterrence and maintain our security. The President has properly called for a new "strategic framework" to address this new reality.

Clearly, we must be judicious in determining how and when we commit our Armed Forces around the world, but just as clearly this global leadership role requires robust, balanced, versatile, and credible Armed Forces to deter potential aggressors and defend our vital national interests, both at home and abroad. To remain a credible force, we must act now to develop the improved capabilities and concepts to protect our homeland, and deter and defeat anticipated and unanticipated threats in the future.

Indisputably, our Armed Forces are the best, most powerful in the world today. This well-deserved reputation was not earned without cost, however. While our servicemen and women have performed their military missions with great dedication and professionalism, our people, equipment, and infrastructure are increasingly stressed by the effects of the unprecedented number of military deployments over the past decade, combined with years of declining defense spending. As the service chiefs have told us repeatedly, future readiness and the upkeep of military facilities have been deferred to pay for current operations and maintenance.

Congress has been sensitive to this issue, providing much needed extra funding for defense in recent years. In fiscal year 2000, we reversed a 14-year decline in defense spending by authorizing a real increase in defense spending. Last year, we continued that momentum by providing an even larger increase for fiscal year 2001. Over the past 2 years, we have increased military pay by over 8 percent; restored retirement and health care benefits to keep faith with those who serve; raised procurement levels to begin recapitalization and modernization of aging equipment; and significantly increased investment in research and development for the future.

While much has been done, much remains. The President is to be commended for the increases he has proposed in defense spending. Since taking office, the President has recommended increases totaling \$38.2 billion. The increases he has proposed for fiscal year 2002 represent an almost 11 percent increase in defense spending above the amount available in fiscal year 2001. While this increase begins to address the shortfalls, I fear it may not be enough.

There is one area of the budget before us I specifically want to highlight—the funding for the development and deployment of missile defenses. Ten years after the Gulf War demonstrated our vulnerability to ballistic missile attack, our forces overseas and our homeland remain defenseless. The Rumsfeld Commission highlighted—and the North Koreans demonstrated—the proliferation and growing sophistication of these ballistic missile technologies increasingly available to rogue states and lawless elements. We must move rapidly to comply with the Cochran Act and deploy missile defenses, "as soon as technologically possible." I would remind my colleagues that this act, which was passed overwhelmingly by the Senate—97–3—and signed into law by the President, limits deployment only by technological progress. There are no limitations based on treaty restrictions. The budget request of \$8.3 billion for missile defense is a step in the right direction.

There is a growing consensus in Congress, in the new administration, and among the American people that significant new investment in defense is necessary and prudent. I credit the joint chiefs for the courageous role they have played in building this consensus. Beginning in September 1998, and at least once a year since then, the chiefs have come before us to testify to critical shortfalls in defense spending. I simply ask now, is the budget amendment before us sufficient to meet the near-term and long-term needs of the respective services?

General Shelton, you and the Service Chiefs have often spoken of a strategy-resource mismatch. We have followed a strategy that has led to a geometric rise in the commitment of our forces, without a corresponding increase in resources. Secretary Rumsfeld, we are all very familiar with the review process you have undertaken to address our military strategy and anxiously await the recommendations you will make upon conclusion of the Quadrennial Defense Review (QDR). Crafting a strategy that more realistically anticipates near-term, as well as emerging threats is a noble goal. Whatever strategy is ultimately adopted must be adequately funded, lest we create another mismatch at a reduced level of capability.

Mr. Secretary, we look forward to working with you to ensure we keep faith with our Armed Forces to fully fund all that we ask them to do. We also look forward to forthright dialogue and partnership that must be a part of our deliberations this year, as well as the fiscal year 2003 budget process and beyond, as we truly begin

to turn this mighty ship you lead to best confront the challenges of today, and the ones that lie ahead.

Thank you.

Senator WARNER. At this time I would also like to insert Senator Thurmond's and Senator Hutchinson's statements for the record.

[The prepared statements of Senators Thurmond and Hutchinson follow:]

PREPARED STATEMENT BY SENATOR STROM THURMOND

Thank you, Mr. Chairman. Secretary Rumsfeld and General Shelton, I want to join our Chairman, Senator Levin, and Ranking Member, Senator Warner, in welcoming you to this long overdue hearing on the fiscal year 2002 budget. Mr. Secretary, you have been very busy during the past 5 months and have stirred up much dust. I congratulate you for setting into motion a critical review of our defense strategy and the operations of the Department of Defense. I look forward to the conclusions of your efforts.

General Shelton, although this may not be your last appearance before the committee, it will be your last posture hearing. You have weathered many storms during your 4 years as Chairman of the Joint Chiefs of Staff and will be remembered for the many actions you advocated to improve the quality of life for our military personnel and their families. I expect that I speak for many here on the committee when I say, "thanks for a job well done!"

Mr. Chairman, as we begin the process that culminates in the National Defense Authorization Act for Fiscal Year 2002, I would like to share a quote from a poem by Elizabeth Barrett Browning:

Happy are all free people, too strong to be dispossessed. But blessed are those among nations who dare to be strong for the rest!

The United States of America is a blessed nation because those who proceeded us had the foresight to provide for the best equipped, trained, and motivated Armed Forces in the history of our great Nation. By our strength we have become the protector of the rest of the world and must not shed that mantle of responsibility. The budget that we will consider over the next several months will provide for the continuation of our leadership whether in the form of a missile defense system, new high technology weapons or the best quality of life for the men and women who wear the uniforms of our military services.

I do not think that anyone will dispute the fact that over the past several years our Armed Forces have become frayed from over commitments and under funding. We must reverse that trend. I believe this budget amendment, although less than many of us had hoped for, is a good start. With this amendment, President Bush will increase the defense budget by more than \$38 billion over the fiscal year 2001 defense budget. More importantly, the increase will provide real benefits in terms of improved family housing, readiness, and research and development. It will also provide robust funding for a National Missile Defense program which I consider the most urgent requirement for our Nation's security.

Mr. Chairman, despite all the positive aspects of this budget, I believe it does not adequately fund the modernization of our Armed Forces. It is still short of meeting the standard of revitalizing our infrastructure every 67 years. It will not close the pay gap between the private sector and the military. More importantly, it assumes almost \$1 billion in savings or efficiencies that are not going to be realized.

Mr. Chairman, I appreciate the fact that fiscal and time constraints will leave us little flexibility to make significant changes to the budget request. However, we must ensure that we maximize the resources that are available. I intend to work with you, Senator Warner and Secretary Rumsfeld, to ensure that we achieve that goal. Thank you, Mr. Chairman.

PREPARED STATEMENT BY SENATOR TIM HUTCHINSON

Mr. Chairman, the President's Fiscal Year 2002 Defense Budget Amendment directly addresses areas of critical need in our military. It places the needs of our troops first, and places special emphasis on quality of life issues. Mr. Secretary you should be applauded for your efforts in shaping a budget that will significantly improve morale and retention.

I am particularly pleased about the level of funding provided for military healthcare. Last year, as Chairman of the Subcommittee on Personnel, I worked very hard to improve the military healthcare system. In cooperation with Senator

Warner and other members of this committee, we passed Warner-Hutchinson Tricare-for-Life, as well as a comprehensive pharmacy benefit. The President's budget includes substantially increased funding for these and other healthcare items.

I do have concerns about some specific programmatic decisions, and I look forward to working with the administration and my colleagues on this committee regarding these issues. However, this budget provides needed funding for personnel, missile defense, and military construction. I look forward to further reviewing the details of the President's submission.

Chairman LEVIN. Thank you, Senator Warner.
Secretary Rumsfeld.

STATEMENT OF HON. DONALD H. RUMSFELD, SECRETARY OF DEFENSE; ACCOMPANIED BY DR. DOV S. ZAKHEIM, UNDER SECRETARY OF DEFENSE (COMPTROLLER)

Secretary RUMSFELD. Mr. Chairman, I had planned to make about 10 to 12 minutes of remarks and ask that my statement be put in the record. I can do that, or if the Senators have to leave, I could delay it until they have a chance. I can do whatever you want.

Chairman LEVIN. With leave of my colleagues on this side, because of that caucus, instead of alternating, let's have three or four on the Republican side ask their questions first and then come to us. Would that be agreeable? I am willing to forego my first line of questions as well.

We did not have a chance to talk about this—let's start out in that direction. Secretary Rumsfeld, why don't you start with your 10-minute opening, and then we will call on our Republican colleagues, at least for a few minutes each, while they are here, to give them a chance to ask a few questions, and then we will take the same number on this side.

Senator WARNER. Thank you, Mr. Chairman, for that very special accommodation.

Chairman LEVIN. Secretary Rumsfeld, please proceed with your opening.

Secretary RUMSFELD. Thank you, Mr. Chairman, and members of the committee.

In discussing the budget, it seems to me it is useful to begin by confronting some less than pleasant but important facts. The U.S. Armed Forces have been underfunded in a number of respects over a sustained period of years. We have been living off of the substantial investments made in the 1970s and the 1980s. Shortfalls exist today in a number of areas, shortfalls that I must say are considerably worse than I had anticipated when I arrived.

Mr. Chairman, as you and members of the committee know well, the U.S. Armed Forces are the best-trained, best-equipped, and most powerful military force on the face of the earth, and certainly the members of this committee have contributed greatly to that strength. Peace, prosperity, and freedom across the world are underpinned by the stability and security that the men and women of the Armed Forces provide.

I was recently in Kosovo and Turkey to visit our troops. They are dedicated men and women who are ready, willing, and able to take on any mission the Government may ask of them. Our country has many strengths. Indeed, in some ways it is because our forces are so capable that we face the challenges we do. Over much of the

nineties, the U.S. has simultaneously underfunded and overused the force, and it has taken its toll. Asked to do more with less, they have saluted, done their best, but it has been at the cost of needed investment in infrastructure, maintenance, and procurement.

With an end to the Cold War, there was an appropriate draw-down, a well-earned peace dividend, but it went too far, in my view, overshooting the mark by a good margin. We are certainly well past the time to take steps to arrest the declines and put the Armed Forces on a path to better health.

For example, many of our facilities are dilapidated and need repair and replacement. There are shortfalls in spare parts, flying hours, training and personnel. Navy nondeployed force readiness is down to 43 percent from 63 percent in 1991. Only 69 percent of the Air Force total combat units are mission-ready, down from 91 percent in 1996. Of the Army's major air and ground combat systems, 75 percent are beyond their half life, and 60 percent of all military housing is characterized as substandard.

While the DOD was using its equipment at increased tempos, procurement of new equipment fell significantly below the levels necessary to sustain existing forces, leading to steady increases in the average age of the equipment. It was called a procurement holiday.

I know you agree that we have an obligation to make certain that the men and women in the Armed Forces have the proper equipment, training, facilities, and the most advanced technologies available to them. The President's 2002 defense budget adds needed funds to begin stabilizing that force. Using the 2001 enacted budget of \$296.3 billion as a baseline, the President earlier this year issued a budget blueprint that outlined a 2002 baseline budget of \$310.5 billion. This included \$4.4 billion in proposed new money for presidential initiatives in pay, housing, and R&D. The request before you proposes to raise that investment \$18.4 billion, as the chairman said, to a total of \$328.9 billion.

Taken together, these increases amount to \$22.8 billion. I am told that represents the largest peacetime increase in defense spending since the mid-1980s. It certainly would represent a significant investment of the taxpayer's money. But let's be clear about this increase; while significant, and while we certainly need every cent of it, it does not get us well. The underinvestment went on far too long, the gap is too great, and there is no way it can be fixed in a year, or even 6 years.

I want to be very straightforward about what this budget will do and will not do. This budget will put us on a path to recovery in some categories, such as military pay, housing, readiness training, and health care. It will start an improvement but leave us short of our goal in others, such as maintenance of weapons systems and reaching best standards with respect to facilities replacement. In other categories there will be continued shortfalls and modest, if any, improvements.

Considering the private sector, the standard for overall facility replacement is 57 years. The DOD's target is 67 years. Under the 2001 enacted budget, the DOD was replacing facilities at an unbelievably poor average rate of 192 years. The 2002 budget gets us closer. It would allow us to replace facilities at an average of 101

years. That is an improvement, but it is still a long way from the acceptable target of 67 years.

In my view, we could do better. With a round of base closings and adjustments that reduce unneeded facilities, we could focus the funds on facilities that we actually need and get the replacement rate down to a lower level. Without base closings, to achieve the target it would require an additional \$7 billion a year for 9 years, or a total of \$63 billion.

Mr. Chairman, let me just say a word about the 2003 budget. Today, we are proposing \$328.9 billion defense budget for 2002. But to keep the Department going next year on a straight line basis with no substantial improvements, just covering the cost of inflation, honestly budgeting for outyears in major weapons systems, and funding health care, which is going to be another \$4-plus billion, according to the actuaries, we would need a budget of about \$347 billion. That is another \$18 billion increase, which would be before addressing important transformation issues.

So where do we find the money? We simply have to achieve some cost savings. We have an obligation to the taxpayers to spend their money wisely. Today, DOD has substantial overhead. Despite 128 acquisition reform studies, we have an acquisition system that is antiquated. It takes twice as long as it did in 1975 to produce a weapons system, and this is at a time when technology generations are shortened to something like a year or two, or 18 months.

We have processes and regulations so onerous that a number of commercial businesses developing military technologies simply do not want to do business with the Department. The Department needs greater freedom to manage so we can use the taxpayer's money more wisely. For example, I think we ought to consider contracting out commissaries, housing, and some other services that are not considered core military competencies, which can be performed more efficiently in the private sector.

For fiscal 2002, the Department proposes a pilot program to see if this is a good idea; the Army and Marine Corps will contract out certain commissaries, and the Navy will contract out refueling support, including tanker aircraft.

Mr. Chairman, I cannot promise it, but I have never seen an organization that could not operate at something like 5 percent more efficiency if it had the freedom to do so. It is not possible today, given all the restrictions on the way the Department must function.

With those savings, we could increase the shipbuilding budget, which certainly needs it. We are on a six-ship basis now. It needs nine ships to maintain the 310-ship Navy. If we keep going in the direction we are going, we are going to end up down at 230 ships at a steady state and that simply is not enough. We could procure an additional 700 aircraft annually, rather than the 189, to help meet and reach a steady state requirement for the Army, Navy, and Air Force, at enormous savings in maintenance and repairs.

We have a big task ahead. Since the Cold War, we have a 30 percent smaller force doing 165 percent more missions. This President's budget proposes a large increase by any standard. It will allow us to make some improvements to the readiness, morale, and condition of our military. The taxpayers have a right to demand

that we spend the money more wisely, in my view. Today, we cannot tell the American people that we are spending it in the best possible manner. I know I cannot.

Fixing the problem is a joint responsibility. It will require a new partnership between Congress and the Executive. We certainly owe it to the men and women in the Armed Forces.

I would point out that one generation bequeaths to the next generation the capabilities to ensure peace, stability, and security. Today, we have the security of future generations of Americans in our hands. We have certainly an obligation to get it right. I am anxious to work with you to achieve that goal, and it certainly will take the best of all of us.

Thank you very much.

[The prepared statement of Secretary Rumsfeld follows:]

PREPARED STATEMENT BY HON. DONALD H. RUMSFELD

INTRODUCTION

Mr. Chairman, members of the committee, I am pleased to present the President's 2002 amended budget for the Department of Defense.

In discussing this budget, it is necessary to begin by confronting some less than pleasant, but important facts: The U.S. Armed Forces have been under funded in a number of respects over a sustained period of years. We have been living off of the substantial investments made during the 1970s and 1980s. Shortfalls exist in a number of vital areas including readiness, operations, procurement, maintenance, infrastructure, modernization and health care—shortfalls, I must say, that are considerably worse than I had previously understood.

The U.S. Armed Forces are the best-trained, best-equipped, most powerful military force on the face of the earth. Peace, prosperity and freedom across the world are underpinned by the stability and security these men and women provide.

I recently took the opportunity to visit our troops in Kosovo and in Turkey. They are dedicated men and women who are ready, willing and able to take on any mission their government may ask of them.

No force in the world can do what they do. Only the United States can quickly move large, effective combat forces across long distances, or conduct large-scale, all-weather precision strike operations.

The U.S. is unparalleled in conducting aerial operations at night, amphibious operations anywhere in the world, operating high endurance Unmanned Aerial Vehicles (UAVs), or conducting corps sized expeditionary operations, and highly complex joint operations.

Our advantages in air-to-air combat and on the high seas have made it impractical for adversaries to use airplanes to attack us or send forces across oceans to threaten us.

So our country has many strengths. Indeed, in some ways, it is because our forces are so capable that we face the challenges we do. Over much of the 1990s, the U.S. has both under-funded and overused this force, and it has taken a toll. Asked to do more with less, they have saluted and done their best—but it has been at the cost of needed investment in infrastructure, maintenance, and procurement.

With the end of the Cold War, there was an appropriate draw down, but it went too far—overshooting the mark by a good margin. We are well past the time to take the necessary steps to arrest the declines and put the Armed Forces on a path to better health.

The problem goes well beyond op-tempo, and is more profound than I expected. For example:

- Many facilities are dilapidated and in urgent need of repair and replacement.
- Health care costs are rising at a much greater rate than the funds provided.
- Outdated management and acquisition systems and processes add millions to the department's costs each year.
- Due to shortfalls in spare parts, flying hours, training and personnel, Navy non-deployed force readiness is 43 percent—down from 63 percent in 1991.
- Only 69 percent of the Air Force's total combat units are mission ready, down from 91 percent in 1996.

- 75 percent of the Army's major air and ground combat systems are beyond their half-life, and Army aviation "safety of flight" messages have increased 222 percent in the past 4 years.
- Sixty percent of all military housing is substandard.
- Force protection capabilities have been under funded and are in need of investments.
- Financial management systems are so poor that the Department can't get a clean audit.
- While DOD was using its equipment at increased tempos, procurement of new equipment fell significantly below the levels necessary to sustain existing forces—leading to steady increases in the average age of equipment. It was called a "procurement holiday." Some holiday!
- Basic research funding has declined by 11 percent since 1992, and RDT&E funding levels have declined 7.4 percent in the same period.

Clearly, we need to arrest this deterioration and to do a better job of balancing the risks we face.

The first responsibility of the Federal Government is to defend the American people. That job is done by brave men and women, who wake up each morning and voluntarily put their lives at risk, so that the rest of us can go about our days in peace and freedom.

We have an obligation to make certain these men and women have the proper equipment, training, facilities, and the most advanced technology available to them.

The current condition of U.S. Armed Forces didn't happen overnight. Each individual action that caused this situation was hardly noticed—a little less procurement here, some purchases and repairs put off there—until one day, the cumulative total shortfalls amount to tens of billions of dollars.

Even the best built, best-engineered car in the world will eventually break down if you put off regular maintenance and repairs. A Ferrari on blocks will get beaten by an Edsel every time.

We have the best Armed Forces in the world. But we cannot allow them to deteriorate any further.

We are about to face new, emerging threats of the post-Cold War world. They are real, they are dangerous, and they are just over the horizon. If we are to meet them, we need to invest now to begin transforming our Armed Forces for the challenges of the 21st century.

But we cannot build a 21st century force quite yet . . . because the 20th century force we have is in serious need of repair.

We need to get on a path to correct the most serious deficiencies; we need to stabilize the force and begin needed modernization; we need to restore DOD infrastructure; and we need to make progress toward transformation—so that our forces are ready for the new and different threats of the new century.

THE PRESIDENT'S BUDGET

The President's 2002 defense budget adds urgently needed funds to begin stabilizing the force.

Using the 2001 enacted budget of \$296.3 billion as a baseline, the President earlier this year issued a budget blueprint that outlined a 2002 baseline budget of \$310.5 billion.

This included \$4.4 billion in proposed new money for Presidential initiatives, including:

- \$1.4 billion to increase military pay,
- \$400 million to improve military housing,
- \$2.6 billion for research and development.

The request before you proposes to raise that investment still further to a total of \$328.9 billion—\$18.4 billion more than the President's February budget blueprint.

Taken together, these increases amount to \$22.8 billion in proposed new money for the Department in 2002.

I am told that this represents the largest peacetime increase in defense spending since the mid-1980s. So, if Congress approves this budget, by historical standards, it would represent a significant investment of the taxpayer's money.

But let's be clear: This increase, while significant, does not get us well. The systematic under-investment went far too long—the gap is too great. There is no way it could be fixed in 1 year, or very likely, even 6.

Mr. Chairman, allow me to provide an idea of the depth of the hole we are in. To get well by 2007—to meet existing standards and steady state requirements in areas like readiness levels with proper flying time, training, and maintenance; replacement of buildings and facilities that are falling apart; fixing family housing and

restoring quality of life for the men and women of our Armed Forces—all of this together would cost the American taxpayers many tens of billions of dollars. That would do little with respect for the investment needed to transform the force for the future.

So, yes, \$22.8 billion is a large increase by historical standards. It is a huge commitment of the American people's hard earned tax dollars. We need every cent of it, but it only begins to make a dent in the leftover problems we face today.

WHAT THE BUDGET WILL AND WON'T DO

I want to be very straightforward about what this budget will do—and what it won't do.

- This budget will put us on the path to recovery in some categories such as military pay, housing allowances, readiness training, and health care;
- It will start an improvement but leave us short of our goal in others such as defense-related science and technology, maintenance of weapons systems and reaching best standards for facilities replacement;
- In still other categories there will be continued shortfalls such as backlogs in property maintenance requirements.

Here are a few specific cases to illustrate the pattern. Take, for example, the Defense health program:

- Today, overall health care costs are increasing at an annual rate of 13 percent.
- The 2001 budget provided \$12.1 billion—falling short of what was needed to cover that rate of increase by \$1.4 billion.
- The 2002 amended budget proposes \$17.9 billion for defense health—a \$5.8 billion increase—that will allow us to cover a 12 percent growth in the costs of medical care and a 15 percent growth in the cost of pharmacy purchases.

So, for the first time in years, the 2002 budget should fund a realistic estimate of military health care costs. This is an area where we are getting well.

We are not getting as well, however, when it comes to the state of DOD facilities. Consider:

- In the private sector, the standard for overall facility replacement 57 years. DOD's target is 67 years.
- Here is the reality: Under the 2001 enacted budget, DOD was replacing facilities at an unbelievably poor average rate of 192 years.
- The 2002 budget which proposes to increase funding for facilities from \$3.9 billion to \$5.9 billion gets us closer. It would allow us to replace facilities at an average rate of 101 years—an improvement, but still well off the acceptable target of 67 years.
- We could do better. With a round of base closings and adjustments that reduced unneeded facilities by, for example, 25 percent, we could focus the funds on facilities we actually need and get the replacement rate down to 76 years at the 2002 budget level.
- Without base closings, to achieve the target 67-year replacement rate would require an additional \$7 billion annually for a period of 9 years or a total of \$63 billion. That is simply not going to happen. We will need to close unneeded bases.

So, by putting off needed spending on facilities replacement, DOD is now in a deep hole. This budget improves the situation—but leaves us short of our goal.

Or, take an example where things are continuing to decline—shipbuilding:

- The current standard based on the 1997 Quadrennial Defense Review is to maintain a steady state of 310 ships.
- Here is the reality: Under the 2001 enacted budget, DOD is building 6 ships a year at a cost of \$11.5 billion—which puts us on course to reduce the size of the U.S. Navy to a clearly unacceptable steady state of 230 ships by 2030.
- The 2002 budget, by providing for six ships at a cost of about \$9.3 billion will keep the Navy on the same course toward a 230-ship steady-state Navy. We need to begin to turn this trend up.
- This puts us in a worse situation than in 2001 because the cost of reversing the decline and “catching up” to the 310 ship steady-state increases by \$3.0 billion every year we put it off.
- To meet the target of 310 ships would require building at least 9 ships each year, at a cost of about \$12 billion.

Or consider the aging of Navy aircraft:

- The desirable average age for Navy aircraft is pegged at 11 years. Given the impact of continued low procurement, that average age has grown steadily to 18 years.
- Here is the reality: Today, with the current strategy, the Navy has a requirement for a total of 4200 aircraft, which allows them maintain an average age of 18 years.
- To meet this steady-state requirement, the Navy needs 180 to 200 new aircraft per year at a cost of \$11 billion.
- The 2001 budget amendment would provide for 97 aircraft at a cost of \$8.4 billion.
- The 2002 budget would provide for 88 aircraft at a cost of \$8.3 billion.
- Even at the rate of 122 aircraft a year, the cost of reversing the decline and "catching up" to the 4200 plane steady-state increases by \$4 billion every year we put off the decision to do so.

Facility repair and maintenance:

- The deferred maintenance for DOD facilities—the cumulative amount that has not been funded from year to year—currently stands at least \$11 billion.
- The 2001 budget included \$4.9 billion for facility maintenance.
- The 2002 amended budget would increase the facility maintenance budget by \$0.9 billion for a total of \$5.8 billion—an increase of 18.4 percent.
- But this increase only funds facility maintenance at 89 percent of the requirement.
- At this rate, because of years of under funding, it would take 20 years to catch up and eliminate the cumulative deferred maintenance.

There are some of the difficulties facing the U.S. Armed Forces today. Despite a proposed increase in defense spending unmatched by any President since the mid 1980s, this budget still cannot not fix the problems we face as a result of a decade of a mismatch between requirements and appropriations.

It is an indication of the depth of the hole we are in today that a \$22.8 billion increase in defense spending makes just a good start in meeting the shortfalls our Armed Forces are facing.

That is just the tip of the iceberg. Today, we are proposing a \$328.9 billion defense budget. But to keep the department going next year on a straight-line—no improvements, just covering the costs of inflation and realistic budgeting—we will need a budget \$347.2 billion. That is a \$18.3 billion increase.

So, where do we find money for the rest of our pressing needs? We simply must achieve cost savings.

FINDING COST SAVINGS

We have an obligation to taxpayers to spend their money wisely. Today, we're not doing that. DOD:

- Has overhead that has grown to the point where it is estimated by some that as little as 14 percent of DOD manpower may be directly related to combat operations.
- Despite some 128 acquisition reform studies, DOD has an acquisition system that since 1975 has doubled the time it takes to produce a weapon system—while the pace for new generations of technology has shortened from years to 18 months. This guarantees that DOD's newest weapons will be one or more technology generations old the day they are fielded, and DOD has processes and regulations so onerous that many commercial businesses developing needed military technologies simply refuse to do business with the Department.

But the Department needs greater freedom to manage so we can save the taxpayers money in areas such as:

- **Rationalization and restructuring of DOD infrastructure.** A 20–25 percent reduction in excess military bases and facilities could generate savings of several billion dollars annually. Legislation authorizing a new round of facilities rationalization will be transmitted later this year.
- **Increasing the thresholds in Davis-Bacon.** If we could change the threshold for contracts subject to Davis-Bacon wage requirements from \$2,000 to \$1,000,000, it would permit the Department to achieve savings of \$190 million in fiscal year 2002 alone. We need that money for shipbuilding, for modernizing our aircraft fleets and for modernization.
- **Contracting out commissaries, housing and other services** that are not core military competencies and that can be performed more efficiently in the private sector.

In fiscal year 2002, the Department proposes a pilot program with the Army and Marine Corps to contract out certain commissaries, and another pilot program with the Navy to contract out refueling support including tanker aircraft.

Mr. Chairman, I have never seen an organization, in the private or public sector, that could not, by better management, operate at least 5 percent more efficiently if given the freedom to do so.

Five percent of the DOD budget is over \$15 billion! With those savings, we could do many of the following:

- Increase ship procurement from six to nine ships a year, maintaining a steady state 310 ship Navy and protecting needed job at Navy shipyards \$3 billion annually;
- Procure several hundred additional aircraft annually, rather than 189, to help meet reach the steady state requirements for Navy, Air Force, and Army aircraft \$16 billion annually; \$82 billion from fiscal year 2003–2007;
- Meet the target of a 67-year facility replacement rate \$7 billion annually for 9 years;
- Fund 100 percent of base operations requirements \$1.4 billion annually;
- Increase defense-related science and technology funding from 2.7 percent to 3 percent of the DOD budget \$1.2 billion annually;
- Purchase needed UH–60 helicopters \$50 million;
- Replenish precision munitions such as JSOW, JDAM and ATACMS \$200 million;
- Buy three additional C–17 aircraft \$600 million, replenish Army trucks \$100 million; Buy HMMWVs \$50 million; Bomber upgrades \$730 million; purchase high-speed sealift \$122 million.

But today there is no real incentive to save a nickel. To the contrary, the way the Department operates today, there are disincentives to saving money.

We need to ask ourselves: how should we be spending taxpayer dollars? Do we want to keep paying for excess infrastructure that provides no added value to our national security? Or we want to spend that money on new technologies that will help us extend peace and security into the new century? That is the choice before us.

We are doing two things:

- First, we are not treating the taxpayers' dollars with respect—and by not doing so, we risk losing their support, and
- Second, we are depriving the men and women of our Armed Forces of the training, equipment and facilities they need to accomplish their missions. They deserve better.

V. CONCLUSION

We have a big task ahead. It took years of coasting and overuse to get us where we are today. We can't dig out in a year.

Following the Cold War, we reduced forces and claimed a well-deserved peace dividend for the American taxpayers. But in the mid-1990s, we began to overdraw on that account. We kept reducing our forces, despite the fact that op-tempo increased.

As a result, we have a 30 percent smaller force doing 165 percent more missions. In short, we have been asking the Armed Forces to do more and more, with fewer resources.

The President's budget proposes a large increase by any standard. It will allow us to make significant improvements to the readiness, morale and condition of our military.

Would all services prefer to have more money to get well faster? Of course.

But at the same time, the taxpayers have a right to demand that we spend their money wisely. Today we can't tell the American people we are doing that. I know I cannot.

To have the support of the American people, we need to be able to make the case that we are fixing these systemic problems and achieving significant cost savings.

Fixing this problem is a joint responsibility. It will require a new partnership between Congress and the Executive Branch. It is a responsibility we have not only to the men and women who serve in our Armed Forces today, but to future generations of Americans as well.

Because of the long lead times, most of the capabilities any President invests in during his tenure are not available during his service; rather they are available to his successors. The force that won the Gulf War was built on the decisions of presidents and congresses over the preceding three decades.

The Tomahawk cruise missile program, the F–15, F–18 and the F–16 aircraft flying today, were developed in the 1970s. Many other technologies, such as the cur-

rent generation of space satellites that gave us dominant battle space awareness in Iraq, were developed in the 1980s.

The point is this: One generation bequeaths to the next generation the capabilities to ensure its security.

Today, we have the security of future generations of Americans in our hands. We have a responsibility to get it right.

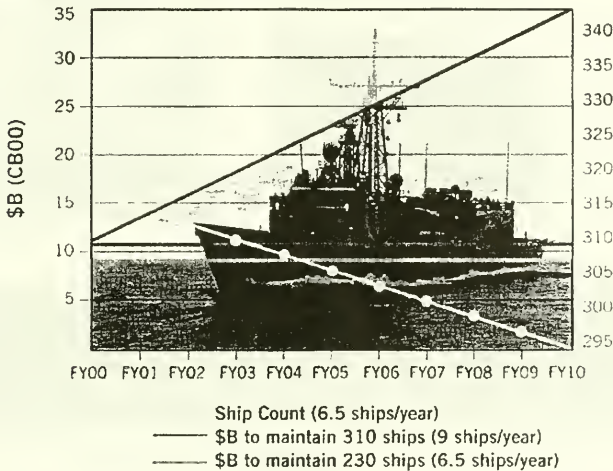
Because of the long procurement holiday of the 1990s, we have been left a poor hand. We must resolve to leave a better hand to our successors.

I am anxious to work with you to achieve that goal. I know full well it will take the best of all of us.



2002BUDGET
downpayment towards the future

Ship Build Rate





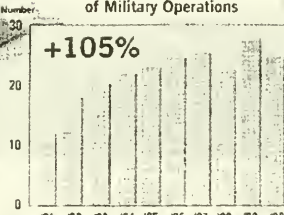
2002BUDGET

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Military Forces Doing More With Less

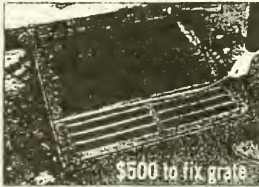
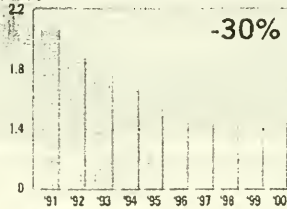


Average Monthly Number
of Military Operations



End Strength
(in Millions)

Active Duty End-Strength



2002BUDGET

downpayment towards the future

Why Freedom to Manage?

FY2002 Topline
\$328.9B

Inflation
Growth and Health Programs
Realistic Cost Estimates

\$347.2B FY2003 Starting Point

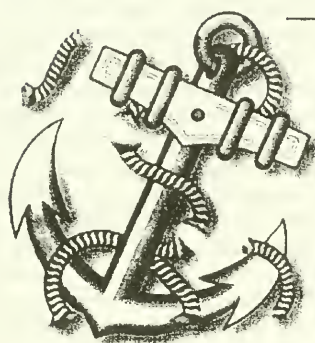
Facilities Improvement Backlog
Readiness Requirements
Depot Maintenance Backlog
3% Science & Technology Goal
Missile Defense
OP-Tempo



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Freedom to Manage

Untangling DoD From Its Anchor Chain



- Reduce excess infrastructure
- Update financial management systems
- Improve acquisition process
- Retain expertise
- Reduce duplicate functions
- Eliminate regulations preventing innovation

Chairman LEVIN. Thank you, Secretary Rumsfeld. General Shelton, I know you have a longer statement, but summarize the highlights in a few minutes, and we will call on our colleagues who have to leave. I hate to do that to you. We could call on you later in the afternoon to supplement or amplify.

STATEMENT OF GEN. HENRY H. SHELTON, USA, CHAIRMAN OF THE JOINT CHIEFS OF STAFF

General SHELTON. Thank you, Mr. Chairman. I can also submit my statement for the record, if you would like. I would like to thank you, Mr. Chairman and Senator Warner, for your very kind words a few minutes ago about my tenure as Chairman of the Joint Chiefs of Staff. It has been my great honor to serve the men and women of our Armed Forces, and I want to once again thank this committee, each and every Senator, for your very strong and staunch support of our men and women in uniform.

I can highlight a few areas, if you would like, Mr. Chairman. First of all, with your help, I believe we have made considerable progress in many areas that have impacted the overall health and welfare of our troops in recent months. Increases in pay and allowances, pay table reform, TRICARE reform and expanded health care coverage, additional funding to provide adequate housing for our military families, and the budget plus-ups to arrest a decline in our first-to-fight units have been critical and have been provided.

But, let me also say that I believe we need to sustain this momentum if we are to preserve the long-term health, as well as the

readiness, of our force in the years to come. Today, as we consider new budgets, new national security strategies, and new ideas of transforming the force, it is important that we always remember that the quality people in our military are the critical enablers that allow us to accomplish the things that we are asked to do.

Since my last testimony, we have been reminded of the human element of national security in several profound ways. Last October, U.S.S. *Cole* was savagely attacked in the Port of Aden. In that incident, 17 sailors died. Some asked why we put a ship in harm's way in such a dangerous part of the world. Well, that is what we do. We go into harm's way to protect America's interests around the world. The sailors of the U.S.S. *Cole* were en route to the Gulf, establishing presence and protecting our Nation's vital interests.

Last December we had two U.S. Army helicopters that crashed during a very difficult night-time training mission in Hawaii. In that crash, nine U.S. soldiers died. Some asked, why would the U.S. Army put soldiers in harm's way during a dangerous training mission in the black of the night? Well, that is what we do. We train for the most difficult missions we may face, because we know that when America's interests are threatened we have to be ready to go, day or night, and failure is not an option. We try to minimize the risk to our great men and women, but we train like we anticipate having to fight.

Then, as we all know, just a few weeks ago we had an EP-3 that was a reconnaissance aircraft flying in international air space over the South China Sea struck by a Chinese fighter, forced to make an emergency landing, and 24 of our personnel were detained. Some asked why we were conducting surveillance of another nation. Well, my answer is, that is what we do. We are vigilant. We are watchful, because we know that our interests and those of our allies in the region may be challenged, and if and when they are, we must be ready.

I am very proud of the performance of these great men and women and the many thousands of others who proudly wear the uniform of our country. They have been, and will always be, our decisive edge. Indeed, they are so good at what they do, that unless there is an accident, or an incident, then we rarely take notice of their daily contributions to our national security. They sail their ships, they fly their aircraft, and they go on their patrols, quietly and professionally, and America is safe to enjoy great prosperity, in part because of them.

However, today our forces and our people are experiencing some significant challenges, a number of which I would like to bring to your attention. Our first-to-fight forces are, in fact, prepared, trained, and ready to meet emergent requirements, but some of our other forces are not as ready as they should be. These include our strategic airlift fleet, our intelligence, surveillance, and reconnaissance assets, our combat service support units, and our training bases, all of which provide critical capabilities to our warfighting forces.

These units are in some cases suffering the consequences of a high OPTEMPO and a diversion of resources to sustain the near-term readiness of the first-to-fight forces. In fact, since 1995, DOD has experienced a 133-percent increase in the number of military

personnel committed to joint operations. These are real-world events, not exercises, and we are doing it with 9 percent fewer people. That has, in fact, caused a high operational tempo on some segments of our force and that, of course, puts a strain on our people.

I believe the fundamental cause of this situation has, in fact, been an imbalance between the demands of our national security strategy and the post-1997 Quadrennial Defense Review (QDR) force structure. Fixing this imbalance, of course, will be one of the top priorities for this year's QDR for Secretary Rumsfeld and all the Joint Chiefs, because the challenge will only increase over time, and we owe it to our people to get it right.

In fact, today we are struggling to reconcile a multitude of competing demands, near-term readiness imperatives, long-term modernization, and recapitalization of aging systems, and infrastructure investments that are central to preserve the world's best warfighting capability. As I have mentioned in previous testimony, and as the Secretary just commented on, we did, in fact, live off of some of our procurement in the 1980s throughout the 1990s.

Now, we have had a marked reduction in procurement. That means the average age of most of our systems, and our key warfighting systems, have been increasing, as was highlighted to some extent by the Secretary.

Let me provide you with just a few examples. Our frontline air superiority fighter, the F-15, averages 17 years of age. It is only 3 years away from the end of its original design service. Our air-borne tanker fleet, as well as our B-52 bombers, are nearly 40 years old. Our intelligence, surveillance, and reconnaissance, along with our electronic warfare aircraft, such as the RC-135s and EP-3s, the P-3s, and our EA-6Bs, all average between 19 and 38 years of service, and our main battle tank, the M-1, and our marine amphibious assault vehicle, are powered by engines that were designed and, in some cases, built in the 1960s.

Finally, numerous helicopter platforms for all of our services have passed or are approaching the end of their original design service lives. In fact, most of the warfighting platforms that I just mentioned meet the 25-year rule required by the great State of Virginia to qualify for antique license plates.

Our force is not aging gracefully. In fact, we are having to spend significantly more in each year to maintain our aging equipment in repair parts and maintenance down time and in maintenance support, which also increases the operational tempo of those great soldiers, sailors, airmen and marines that have to maintain them.

If we do not replace some of these systems soon, either the force structure will shrink, or we will have to continue to maintain the old systems, resulting in spiraling operations and maintenance costs and reduced combat capability. In my opinion, these are unacceptable alternatives, which begs the question, what should we do?

I believe there are two answers. First, we must bring into balance our strategy and our force structure, and we must significantly increase our efforts in procurement to modernize and recapitalize our force. The QDR should produce the strategic blueprint and the investment profile necessary to shape our force to carry out the new strategy.

Another related concern is the fact that our vital infrastructure is decaying at an alarming rate, as Secretary Rumsfeld has commented. Budget constraints have forced us to make some hard choices. The fact is that in the real property maintenance accounts today, we currently have a backlog that is growing, that today totals over \$11 billion. I think that a quality force deserves quality facilities, and therefore it is essential that we start providing the resources to reverse the deterioration of out post, bases, camps, and stations.

Now, Mr. Chairman, I would like to focus for just a second on the decisive edge of our force, the men and women in uniform. President Bush stated that a volunteer military has only two paths. It can lower its standards to fill its ranks, or it can inspire the best and the brightest to join and to stay. The latter starts with better pay, better treatment, and better training.

The President, I believe, had it exactly right. We must continue to close the significant pay gap that still exists between the military and the private sector, and we must make continued investments in health care, housing, and other quality-of-life programs that are essential to sustain our force.

One of the most valued recruiting and retention tools that any corporation can offer potential employees or its current workforce is a comprehensive medical package. DOD is no different. For that reason, the Chiefs and I strongly urge Congress to fully fund the defense health program and all health care costs as a strong signal that we are truly committed to providing quality health care to our troops. I do not think there is a better way to renew the bond of trust between Uncle Sam and our service members and retirees than this commitment to quality health care.

Additionally, I would ask for your support to help ensure that all of our men and women in uniform, single, married, or unaccompanied, are provided with adequate housing. Unfortunately, this is not the case today. About 62 percent of our family housing units are classified as inadequate, and correcting this situation is essential if we are to improve the quality of life for our service members and their families. We have learned over the years that we recruit the member, but we retain the family.

To sum up, Mr. Chairman, I believe that we have the best military, the best Armed Forces in the world today. But having said this, I believe that we will continue to enjoy our military advantage, or that it will erode over time if we fail to prepare for the evolving strategic landscape for the 21st century. Our greatest adversary today, as I have said so many times, in my opinion, is complacency. It is imperative that we take action today to ensure that our men and women in uniform are properly equipped, trained, and led. If we do so, I am confident that we will prevail in any challenges that we face in the future.

I am struck by the fact that today I believe we have an opportunity to build the foundation for another long era of U.S. military supremacy and, in doing so, we will help underwrite the peace and prosperity that our Nation currently enjoys, and should continue to enjoy well into the future.

Mr. Chairman, thank you for the opportunity to make this statement, and we now stand ready to take your questions.

[The prepared statement of General Shelton follows:]

PREPARED STATEMENT BY GEN. HENRY H. SHELTON, USA

It is an honor to report to Congress today on the state of America's Armed Forces. As every member of this committee knows, our Nation is blessed with an unsurpassed warfighting force that has been actively engaged over the past year supporting America's interests around the globe. I am extremely proud to represent the young men and women of our Armed Forces. They serve our country selflessly, away from home and loved ones, and are frequently put in harm's way. They personify America at its very best.

It is those young soldiers, sailors, airmen, and marines who will fight tomorrow's wars with the strategy, force structure, doctrine, and equipment that we develop today. For them to do what we ask—to remain the best in the world—we must give them the best tools. This means ensuring that they always have the resources necessary to be trained, armed, and ready. It means properly compensating them today and tomorrow. It means recapitalizing our weapon systems and infrastructure, and modernizing the force to meet tomorrow's challenges. As we consider the choices ahead, may we always remember that our great people have the most at stake in the decisions that we make here in Washington.

In this Posture Statement, I will address two broad topics: (1) *Sustaining a Quality Force*, concentrating on those programs that are critical to maintaining the force; and (2) *Building Tomorrow's Joint Force*, what we are doing today to prepare for tomorrow's challenges.

I. SUSTAINING A QUALITY FORCE

America's best and brightest must continue to answer the clarion call to serve if our Nation is to remain the strongest force for peace and stability on the planet. It is the quality of our people that gives us a decisive edge over our adversaries and to sustain this qualitative edge we must support our personnel with continued investments in pay compensation, health care, housing, and other quality of life programs.

Compensation Gains

As a result of compensation gains in fiscal year 2000 and fiscal year 2001, we have made great strides toward improving the standards of living for members of our Armed Forces. With the significant support and help of this committee, Congress, and the administration, the Fiscal Year 2001 National Defense Authorization Act (NDAA) provided one of the largest pay raises in recent history, and allowed us to greatly reduce out-of-pocket (OOP) costs for off-base housing, instituted retirement reform, and implemented pay table reform.

That same level of outstanding support was evident in the fiscal year 2001 NDAA. The 3.7 percent pay increase maintains our commitment to close the pay gap between the military and their civilian counterparts. Additionally, the fiscal year 2001 NDAA provided \$30M in Basic Allowance for Housing (BAH) to further reduce OOP expenses to less than 15 percent. The opening of the Thrift Savings Plan to military members, the implementation of a monetary allowance for military members currently receiving food stamps, and revising the enlistment/retention bonus authority has also demonstrated to our forces a commitment to their quality of life. This helps us attract and retain quality people.

We need to sustain the momentum of the past 2 years. The pay raise slated for fiscal year 2002 and your continued support of our efforts to reduce OOP expenses for housing to zero by fiscal year 2005 will further improve the quality of life for our servicemembers and their families. This is not only important for their well being, it is equally important to our efforts to recruit and retain a quality force.

Military Health Care

One of the most valued recruiting tools any major corporation can offer a potential employee is a comprehensive medical package. DOD is no different. Congress and the administration have done much over the last year to address the health needs of our active duty and retired servicemembers and their families. As in the civilian sector, healthcare costs for the military community have continued to rise rapidly. Passage of the fiscal year 2001 NDAA demonstrated Congress' commitment to honor the promise to those currently serving and to those who served honorably in the past. I appreciate the support of Congress for this effort.

We are pursuing full funding of healthcare costs as a strong signal that we are truly committed to providing quality healthcare for our active duty military members, retirees and their families. This commitment will have a profound impact on

all who wear our uniform, and will encourage those who are considering a military career. It is also imperative that we fund healthcare benefits for retirees and their families in such a manner that this funding no longer competes with operations, force structure, and readiness. This will honor the national commitment we made long ago to our military retirees, without impacting the readiness and military capability of today's force.

Additionally, the Joint Chiefs are working with the Assistant Secretary of Defense for Health Affairs in seeking business practice improvements and implementing the new benefits identified in the fiscal year 2001 NDAA. Beginning in fiscal year 2002, TRICARE will pay costs not covered by Medicare for over-65 retirees and their families.

Housing

Housing continues to be a core element in our efforts to improve the quality of life for our service members. All our men and women in uniform deserve adequate housing. The Services remain on track with plans to eliminate inadequate housing for unaccompanied enlisted personnel by 2008. The situation for family housing is more challenging. Last year, the Service Family Housing Master Plans deemed almost 61 percent of family housing units inadequate. The Services are revamping their respective Family Housing Master Plans to revitalize, privatize, or demolish these inadequate units by 2010.

Congressional support for DOD's three-pronged strategy to improve family housing has been outstanding and is greatly appreciated. First, the initiative to raise housing allowances to reduce out-of-pocket expenses for our servicemembers has provided welcome relief to the force. Second, creating smart partnerships with the private sector makes defense dollars go further and effectively frees up resources to revitalize existing housing. Finally, your continued efforts to fund our construction and privatization programs will pay great dividends by ensuring our servicemembers and their families can live in respectable accommodations.

There is an inseparable, direct link between personal and family readiness and our total force combat readiness. Your continued support of these and other quality of life programs will provide substantial returns in retaining not just the member, but also the family.

II. BUILDING TOMORROW'S JOINT FORCE

In this section, I present some of my thoughts on those actions we are taking today, to build tomorrow's joint force. In my view, these are the critical enablers for any new defense strategy designed to confront the challenges of this 21st century.

Modernization

While recent funding increases have arrested the decline in current readiness, our modernization accounts, which are critical to *future* readiness, remain under funded. Solving this problem has become my most urgent priority.

Modernization will help reduce our capability concerns by leveraging advanced technology to improve interoperability. Also, newer, technologically advanced Intelligence, Surveillance, and Reconnaissance (ISR) collection assets, communications systems, and logistics support systems will help reduce manpower requirements while simultaneously improving the CINCs' warfighting capabilities. Modernization is also necessary for improved operational flexibility and to ensure that we retain a technological and qualitative superiority on the battlefield.

We must modernize our force; however, we must not sacrifice current readiness to do it.

Recapitalization of Force Structure

After the Cold War, we made a conscious decision to cut procurement and live off the investments of the eighties as we reduced force structure. Between fiscal years 1993-1998, approximately \$100 billion was taken out of DOD procurement accounts. The 1997 QDR Report identified a potentially serious procurement problem if we did not increase investment in new platforms and equipment. A goal of \$60 billion in procurement was established as an *interim target* to recover from the sharply reduced procurement spending in fiscal year 1993-1998. Last year, for the first time, this interim goal was achieved.

However, several recent studies, to include one by the Congressional Budget Office, have concluded that \$60 billion is *not* sufficient to sustain the force. Since the QDR will determine the strategy and size of the force, I cannot give you a precise recommendation on the additional amount required. What is clear today is that we must accelerate the pace of replacing our aging and worn systems if we are to deliver the right capability to meet future challenges. We simply cannot continue to

defer procurement and continue our usage at existing rates if we expect our force to meet all of our 21st century commitments.

Recapitalization of Infrastructure

Our vital infrastructure is decaying. The understandable desire for a post-Cold War peace dividend forced us to make hard choices that redirected funds from military facilities and infrastructure accounts to support immediate readiness requirements. Years of belt-tightening have increased the risk of facility failures and have added to the costs of upkeep.

Within civilian industry, the replacement, restoration or modernization of physical plant assets is accomplished in roughly a 50-year cycle. The rate of investment in DOD infrastructure has fallen to a level that requires over 100 years for recapitalization. We must find the resources to accelerate the recapitalization of our infrastructure to avoid further damage and degradation. A sustained period of increased funding is required to develop a modern infrastructure capable of supporting our 21st century force and the next generation of weapon systems.

In its current state, the DOD infrastructure is still capable of supporting the National Military Strategy; however, in some locations, we face a high risk of operational limitations that may affect mission success. Throughout DOD, installation readiness is at an all-time low. In fact, 60 percent of our infrastructure is rated C-3 (some failures) or C-4 (major problems). It is particularly alarming that the current condition of training and operational facilities is lower than any other facility category in DOD. Usage restrictions and the shortage of required training ranges and operating areas slowly but inevitably degrade the readiness of our operational units. The poor material condition of facilities also directly contributes to lost or degraded training opportunities.

In sum, our deteriorating infrastructure continues to impair readiness and detract from the quality of life of our service members and their families. I ask you to support our efforts to fix this problem, because it effectively reduces the efficiency of our uniformed and civilian workforce and further lowers retention rates for highly qualified and otherwise motivated personnel. A world class fighting force requires mission-ready facilities.

Additionally, we sorely need further base closure rounds as part of our overall recapitalization effort. According to the April 1998 DOD BRAC Report, we have 23 percent excess base capacity in the United States, a situation that directly impacts the ability of the Service Chiefs to provide, train, maintain, and equip today's force. By removing validated excess capacity, we could save \$3 billion per year in the long-term. This money would then be available to fund appropriately our remaining bases and help fix the remaining infrastructure.

TRANSFORMATION

Joint Vision 2020

Our future force must be a *seamless joint force* and our roadmap for achieving this joint force is detailed in *Joint Vision 2020* (JV 2020). Although the Services are busily engaged in the transformation of their respective forces, in my view these individual transformations will be most effective operationally *only* if they mesh fully with the more encompassing joint transformation called for in JV 2020.

A key feature of this transformation will be the implementation of dominant maneuver, precision engagement, focused logistics, and full dimensional protection in the context of Joint Task Force (JTF) operations. Today, we successfully execute JTF operations when they are needed. But, in my view, we will be more responsive and agile in the future with JTF operations as our "national military core competency." This goal will not be achieved through technology and materiel solutions alone. It will also require intellectual innovation and the development of doctrine, organizations, training and education, leaders, people, and facilities that effectively make use of new technologies.

Using JV 2020 as a conceptual template, the goal of our joint transformation effort is a force that is dominant across the full spectrum of military operations. DOD is seeking to transform its forces to meet future challenges through a comprehensive plan that integrates activities in several areas:

- Service concept development and experimentation efforts;
- Joint concept development and experimentation designed to integrate Service capabilities where possible and develop joint solutions where necessary;
- Implementation processes in the Services and joint community to identify rapidly the most promising of the new concepts; and

- Science and Technology efforts focused on areas that can enhance U.S. military capabilities.

This overall transformation effort is not focused solely on US military capabilities. USJFCOM has developed an aggressive plan for outreach to multinational partners as well. Our objective is to bring allied perspectives into the concept development process to facilitate our future ability to operate effectively within a coalition environment.

Based on joint experimentation and implementation programs, we expect to see some new capabilities that will be operational well before 2020, while other promising concepts will continue to be explored and developed. Our overarching goal is to bring these various capabilities together in a coherent and synchronized fashion.

OTHER TRANSFORMATION ISSUES

Logistics Transformation

Our goal for logistics transformation is to provide the joint warfighter real-time logistics situational awareness by leveraging technology and optimizing logistics processes. The Defense Reform Initiative Directive #54, Logistics Transformation Plans, establishes a framework of objectives and a means to measure progress toward accomplishing this goal.

Ultimately, we must create a network-centric environment in which data can be accessed in real time at its source. This network-centric environment will provide the warfighter with operationally relevant logistics information necessary to make accurate, timely decisions and to maintain our military advantage into the next decades.

Mobility

We are making significant improvements in our ability to deploy forces. Our fleet of 35-year old C-141s is being replaced with C-17s, and numerous conventional break-bulk cargo ships are being replaced by Large Medium Speed Roll-on Roll-off ships. However, we foresee increased challenges and stresses to the mobility system. These challenges were carefully examined in the comprehensive 2-year Mobility Requirements Study 05 (MRS-05). The study determined that programmed strategic lift capability falls short of requirements for both CONUS and inter-theater missions. MRS-05 also determined that increased capability is needed within theaters to move equipment and supplies forward from pre-positioning sites, airports, and seaports. Consequently, we are aggressively pursuing policy changes, host-nation agreements, and, where necessary, considering new equipment as part of the 2001 QDR to ensure timely force deployment. More than ever, Congressional support of strategic lift is needed if we are to build a national mobility capability sufficient for our current and future needs.

Joint Interoperability

We have made progress in the area of interoperability with an overall effort focused on creating a force that is ready to fight as a coherent joint unit, fully interoperable, and seamlessly integrated. Our long-term goal is to require that interoperability be "designed in" at the beginning of the development process rather than "forced in" after the fact. We intend to achieve this goal through improvements in the requirements generation process, including establishment of interoperability Key Performance Parameters (KPPs) and Information Exchange Requirements (IERs) in systems development. A requirements-based Joint Operations Architecture, well grounded in joint doctrine, will provide a roadmap for addressing interoperability issues across the full spectrum of capabilities. These efforts will enable DOD's senior leadership to focus more on interoperability and integration of the joint force.

INTELLIGENCE AND COMMUNICATIONS TRANSFORMATION

Intelligence, Surveillance, and Reconnaissance

Achieving and maintaining a decisive advantage in our ability to access, gather, exploit, and act on information remains a critical aspect of our combat capability and readiness. A full spectrum ISR capability is the mainstay of that concept. To achieve this, we need to place more emphasis on the capability to "watch" or "stare at" targeted objectives with collection systems able to monitor, track, characterize, and report on moving objects and dynamic events *as they occur* in the battlespace. In other words, a constant rather than periodic sensor access is required.

Intelligence Interoperability

Intelligence interoperability is the foundation of our capability for dominant battlespace awareness. Our goal is to ensure that our forces retain an information edge over potential adversaries. To be fully interoperable, intelligence must be produced and delivered in a fashion that immediately supports command decision making and mission execution. We are gradually tearing down barriers to interoperability between intelligence and operations systems to ensure we provide the Common Operating Picture essential to future command and control. The Common Operating Picture will provide a unified view of the battlespace for the soldier in the field, the pilot in the cockpit, and the commander, regardless of location.

Intelligence Federation

The Intelligence Federation is a new concept wherein designated commands and units provide specified intelligence support to an engaged CINC during a crisis or contingency operation using a pre-planned methodology tailored to that CINC's area of responsibility and operational requirements. The concept evolved from the growing need to ensure the collective resources of the intelligence community function as a "system of systems," so that users are able to receive information tailored to their unique requirements, and with the necessary fidelity. To do this effectively, we need to create a federation among intelligence components using Joint Tactics, Techniques, and Procedures.

Global Information Grid (GIG)

The CINCs testified last year that a major warfighting deficiency in some theaters is the inability to plan quickly and execute decisively because of C⁴ deficiencies. I wholeheartedly agree. Simply put, our C⁴ infrastructure falls short of what is needed to support properly our decision makers and the men and women on the front lines. To help alleviate this shortfall, we must ensure that our warfighters have full and reliable access to the GIG from any point on the globe. The GIG is the globally interconnected, end-to-end set of information capabilities, associated processes, and personnel that we are developing to manage and provide information on demand to warfighters, policy makers, and supporting personnel. I believe that our ongoing efforts to bring the GIG online will provide the foundation for information superiority on the battlefield in the decades ahead. To that end, it is necessary to continue to invest in and upgrade the GIG infrastructure. Satellites, fiber optic cables, support of network operations, information assurance programs, and DOD's use of the radio frequency spectrum, are all tremendously important to achieving this goal.

Radio Frequency Spectrum Access

There is an important debate ongoing concerning the proposed reallocation of a segment of the DOD radio frequency spectrum to commercial users, an initiative with the potential to disrupt our transformation effort. In the last 8 years, 247 MHz of the RF spectrum for Federal use, primarily used by DOD, has been reallocated for commercial use by the private sector. I am concerned that further reallocation of frequency spectrum for commercial use, without comparable spectrum to execute DOD's critical functions, will have a major impact on our ability to execute our missions. Our success on the battlefield largely depends on our ability to use advanced communications technology to exchange vital information between decision-makers, commanders, and deployed forces.

One of the principal areas of interest to the private sector is the 1755–1850 MHz band. This band is currently used for tactical data links; satellite telemetry, tracking, and control; precision guided weapons; air combat training systems; and the delivery of voice, video, and data information to warfighters and commanders in the field. These systems are indispensable to our national defense. Some industry advocates have suggested that DOD share segments of this frequency band or relocate to another operationally suitable spectrum. I believe this proposal is problematic for two reasons. First, according to our analysis, sharing with commercial users is not possible due to interference over large geographical areas and metropolitan centers. Second, moving DOD communications to a different, but comparable, spectrum could be problematic due to the lengthy transition period required. Some national security satellites will use this frequency band well into the future. If directed to move, a more detailed cost and transition timeline will be required to ensure continuity of our Nation's defense capabilities. It is imperative that we strike a reasonable and informed balance between commercial needs and military requirements. I understand that there is a White House process, led by the National Security Council and the National Economic Council, which is reviewing this issue to achieve this balance, critical for national security. We anticipate that suitable solutions will be found that are acceptable to all parties.

CONCLUSION

Today, even as we seek to transform our force to face an evolving security environment, our goals remain firm. We must protect America's interests, deter aggression, support peaceful resolution of disputes and most importantly, to be ready to intervene or respond to a conflict and win decisively.

This is a critically important time for our Nation as we move further into the new millennium as the only global superpower. It is clear that we have a great deal of work to do with the administration and Congress as we develop a new NSS and support the requirements of the QDR. Our professional, highly trained, and motivated young Americans in uniform are counting on us to make the right decisions. We have an opportunity in the months ahead to build on successes, address the challenges, and sustain and support our dedicated forces. We must provide our warfighting forces with the best tools available as they defend America's interests, and we must shape a future force that will help us achieve our national security objectives well into the 21st century. Together, I am confident we can capitalize on this opportunity.

Chairman LEVIN. General Shelton, thank you. We are going to modify my announcement on the order for questions. I am going to first call on Senator Warner, who is going to allocate his 6 minutes, and then we will pursue the usual rotation.

Senator WARNER. I thank the chairman. Two of my colleagues are going to be leaving us at 3:00, so if the Senator from Alabama and the Senator from Maine would like, take my time, 3 minutes each.

Senator SESSIONS. Thank you, Mr. Chairman. Perhaps I will not use all that time. I would just like to thank Secretary Rumsfeld for challenging the system, for asking tough questions, and for not believing that anything is a sacred cow. The President indicated he was going to do that.

I think it is your responsibility to do so, and I know you are just now beginning to get your staff approved, confirmed, and on board. We are behind in that, and I know it is difficult to prepare a detailed budget during the time that you are giving fundamental review to the priorities of the Department of Defense.

I, for one, am going to be as supportive as I possibly can, because when you testify that you need this program or that program, I want you to have had the time to study it and make that recommendation with the confidence and backing you need.

We are, indeed, increasing spending around this body an awful lot. Cutting social programs, Mr. Secretary, means that the projected increases cannot be reduced. That is what cutting means in a social program. On defense, however, we do not seem to be as determined to protect it.

I think it is a core function of our Government to provide for the national defense and the national security. It ought to be given our highest priority in the tough budget-making issues that we face. I will support you on that, and I also hope that at the same time you will follow through, as you have indicated, on commitments to efficiency, productivity, and research, which perhaps can save us a lot of money in the years to come.

Thank you very much.

Chairman LEVIN. Thank you, sir.

Senator COLLINS. Thank you, Mr. Chairman. First, I want to thank Senator Warner for his graciousness in letting me use his time so that I can participate in the hearing.

Secretary Rumsfeld, General Shelton, you have certainly painted a very grim picture, which obviously indicates that these problems did not occur overnight. They have been building for a long time, which raises questions of why the alarm bells were not sounded in the previous administration. But leaving that issue aside, Secretary Rumsfeld, you have emphasized the difficulty of "getting well" in 1 year with this budget. You have mentioned with regard to shipbuilding that meeting the QDR target of 310 ships would require building at least nine ships each year, at a cost of about \$12 billion.

Has the Pentagon considered recommending to Congress the use of advance appropriations to step up the shipbuilding budget in a way that might be more affordable in the short term? Ultimately, we are still going to have the same costs, but is there consideration underway at the Pentagon to looking at advance appropriations?

Secretary RUMSFELD. Senator Collins, that is an important question, and I am not an expert on it. Dov Zakheim has been working with the Office of Management and Budget on it. I do not see any other way we are going to get that shipbuilding budget up and going in the right direction without doing forward-funding.

Whether or not the balancing of the pros and cons of it will be sufficiently persuasive with the Office of Management and Budget (OMB) is a question, but it is clearly a way for us to increase the number of ships per year, which we need to do. We need to do it because we need the ships. We also need to do it because the industrial base and the shipyards need the work, and I am certainly hopeful that we will be able to do that in addition to increasing funds in the shipbuilding budget in the coming year.

Senator COLLINS. Thank you, Mr. Chairman. Thank you, Senator Warner.

Senator WARNER. Thank you, Mr. Chairman. If I might just comment on that too, Senator Levin and I met with you yesterday and this was central to our discussions. We want to join you on this. I think hopefully within Congress there is a majority view that this is a way to aid shipbuilding and maybe other procurement accounts. So let us work together. If it requires legislation, let us roll along with it.

Chairman LEVIN. Very good. Thank you, sir.

Secretary Rumsfeld, just on that last point, I think this committee is more than happy to look at the pros and cons of these various approaches, but we have had these considerations before. There are some definite advantages, but there are some definite disadvantages to that kind of funding, and the committee will be happy to look at all of those advantages and disadvantages when you are ready to submit them to us.

I was struck, Secretary Rumsfeld, by your comment that the United States Armed Forces are the best-trained, best-equipped, most powerful military forces on the face of the earth. I can assure you that this committee will continue to do everything in our power to keep it that way, just as we have in the past.

This committee has acted consistently on a bipartisan basis to make sure that we are the best-trained, best-equipped force on the face of the earth. We worked with our Secretaries of Defense, with our uniformed leaders, and we will continue to carry on that role.

Secretary Rumsfeld, the Chairman of the Senate Budget Committee, Senator Conrad, sent a letter to President Bush with copies to you this week outlining the fiscal challenges we face, particularly those that relate to your budget amendment for the Defense Department.

The Chairman of the Budget Committee looked at the possibility that the impending summer revisions to our economic forecast could show that the small remaining surplus left for 2002 would evaporate because of a slowdown in the economy. Does the administration believe that your defense budget amendment can be paid for in fiscal year 2002 without using the medicare or social security trust funds?

Secretary RUMSFELD. Absolutely.

Chairman LEVIN. Last week, the Deputy Secretary of Defense announced the creation of a senior executive council that would make key decisions on defense matters. This council does not include, or at least does not appear to include, the Joint Chiefs of Staff or other senior military leaders. Can you explain why they are not included in that council?

Secretary RUMSFELD. The group you are referring to is the Deputy Secretary, the Under Secretary for Acquisition, and, as I recall, the three service secretaries. They deal continuously with the Chairman and the Chiefs of Staff of the services. The issues they will address will be issues that are at their level and of the nature that are appropriate to them.

For example, that group, plus Dr. Zakheim and I, have been involved with the Chairman and the Chiefs practically every day now for the last 4 weeks, and the interaction is continuous.

Chairman LEVIN. Thank you. At your hearing last week, Mr. Secretary, I asked you if you agreed with General Kadish's assessment that if you adopted and implemented the recommendations on missile defense from the missile defense strategy review that he has just completed, that those recommendations would not lead to a violation of the Anti-Ballistic Missile (ABM) Treaty in fiscal year 2002.

You said that you would give us your answer relative to that, after reviewing General Kadish's assessment. Now that you are presenting the fiscal 2002 budget, let me ask you this: In this budget request for fiscal year 2002, are you incorporating recommendations from the National Missile Defense Strategy Review, which General Kadish briefed us on June 13?

Secretary RUMSFELD. It turns out that in our eagerness to consult with Congress, General Kadish briefed you and Congress prior to briefing me on that program. The program has not been briefed to me. It is in a state of some adjustment because of changes in the budget plan.

Yesterday, I met with General Kadish, goodness, for I am sure an hour and a half or 2 hours, and some of the people to discuss the treaty aspect of it, and I am prepared to speak to that. But the actual details of the research and development (R&D) budget, not the deployment budget, but the R&D budget that General Kadish is working on, as I say, are still in a state of some flux.

Chairman LEVIN. In the budget that you are presenting to us today, is there anything in that budget which would cause a violation of the ABM Treaty in fiscal year 2002?

Secretary RUMSFELD. They do not know for sure. That is to say, as you engage in a research and development activity, it is not clear how it is going to evolve, and General Kadish cannot answer the question, nor can I. What we can say—

Chairman LEVIN. Well, let me interrupt you there. General Kadish did answer the question. He said it did not.

Secretary RUMSFELD. That was a perfectly honest answer from his standpoint at that stage of his knowledge. As I say, he has—

Chairman LEVIN. You were briefed by him. How can you disagree, then, with his conclusion?

Secretary RUMSFELD. May I finish the sentence here on this, so that we can get it completely clarified. General Kadish's program is still being adjusted, and therefore we cannot say that the program is final and therefore we know.

Second, we cannot know because it is a research and development budget, and it is impossible to be able to say exactly which R&D program is going to evolve or progress faster or slower than another.

What I can say is that the law is the law, and we will comply with it. I can also say there is a compliance requirement in the Pentagon that, as things do evolve, it has to go through a compliance review, so the chances of anything happening that would be contrary to U.S. law, or contrary to the treaty, are zero.

Now, let me go the next step. The President has said that he wants to pursue promising technologies, and he wants to be able to at some point deploy a missile defense capability. The ABM Treaty does not permit that. That means that they're in conflict.

That is why the President has said he wants to enter into discussions with the Russians and see if we can find a way to establish a new framework to move beyond the ABM Treaty. Those discussions and talks began with my visit with the Defense Minister of Russia, Mr. Ivanov, the President's meeting with Mr. Putin, and Secretary Powell's meeting with his counterpart.

They will be starting up again soon, and the President's full intention is to find ways that the ABM Treaty will not inhibit his goal of providing missile defense for the American people, deployed forces, and friends and allies.

Chairman LEVIN. Senator Inhofe.

Senator INHOFE. Thank you, Mr. Chairman. First of all, we have somewhat of a pilot crisis. I think we all agree with that. One of the issues we talked about last year was individually contracting out to retired military personnel some of the flying functions of noncombat vehicles.

We asked in our defense authorization bill last year that the DOD study this and report back to us by April as to what their recommendation would be. I would like to ask first, when are we going to get the report back, and second, what thoughts do you have on the contracting out provision for retired military personnel?

Secretary RUMSFELD. Are you familiar with it?

General SHELTON. Yes, sir.

Senator Inhofe, we, in fact, in the Joint Staff, based on the requirement in the authorization act, completed that study, and have forwarded that to the Office of the Secretary of Defense (OSD) for review. It has not reached the Secretary yet. We did examine all facets of it. To be candid, and not to go into too much detail here, it does not look very promising at this point.

There are numerous things tied into it, including the combat-readiness of the pilots that we train in those aircraft to end up being commanders of the larger aircraft in our strategic lift, but all that has gone up to OSD. You should be receiving the complete report shortly.

Senator INHOFE. Shortly?

General SHELTON. Yes, sir.

Senator INHOFE. In a month?

General SHELTON. Sir, I cannot speak for the Secretary.

Senator INHOFE. Why don't you advise us for the record when you think we will get that, because I think it is something that does have merit, and I would like to kind of bring it up for discussion at some point.

[The information referred to follows:]

The report is still under review in the Office of the Secretary of Defense. At this point, we cannot offer a date certain when the report will be completed. We will ensure that proper notifications are made when the report is released by the Department of Defense.

Senator INHOFE. Secretary Rumsfeld, in one of your management reforms, you talk about outsourcing depot maintenance workloads beyond a depot's capacity. It is my understanding that you measure capacity by a 40-hour work week. In other words, you measure one shift when there is capability in all of our three remaining air logistics centers, for example, to operate with three shifts.

Wouldn't it be smarter to go ahead and change the definition of capacity, and maybe have that capacity at two shifts, as opposed to wasting that infrastructure in outsourcing when it isn't really necessary?

Secretary RUMSFELD. Dov Zakheim has been working on this. My understanding is that the proposal relates just to backlog that is not being met, so if a depot is not able to meet the backlog, that that then would be freed up for different outsourcing.

Senator INHOFE. But if the depot is not able to meet that because they are using the current definition of full capacity, would it not be advisable to at least explore expanding that capacity by increasing from one to three, or from one to two shifts?

Secretary RUMSFELD. I would be happy to take a look at it.

Senator INHOFE. Okay. Why don't you do that and answer it for the record.

[The information referred to follows:]

Options for overtime and extra shifts were not excluded. The initiative recognizes that depots could choose to bid on competed work by increasing overtime and adding extra shifts. However, excessive overtime cannot be sustained for extended periods of time and could be uneconomical. The ability to hire additional qualified personnel from the local labor pool, either for extra shifts or to utilize existing equipment and facilities, is a factor in determining a depot's ability to accomplish extra work.

Senator INHOFE. I was pleased to see the Crusader is going to receive the funding that would put it online, I believe, in 2006. I

am not sure, General Shelton, but I think you are in agreement, as most of the Army people are, as to where we are with the old Paladin; it is an outdated system, and many of our prospective adversaries have a lot more capacity than we have. Is there any chance that you would be able to move that up from 2006 to 2005 in terms of having one deployed and operating?

General SHELTON. Senator Inhofe, I think that as a part of the QDR process, part of the examination of our strategy and our force structure, that system, like all the other systems that we have will undergo a review. As part of that, certainly in the Army's overall plan for transformation, where we would need it to dovetail in with their objective force, or with their interim force, even, is what will have to be examined. Of course, in that comes the priority issues, of where they prioritize that, and I cannot speak for the Army right now. I will have to take that one for the record and get back to you.

[The information referred to follows:]

Transformation is an evolutionary process and the Fiscal Year 2002 Amended Budget represents a balanced program, which maintains an Army, trained and ready. To support the Army's future goals, significant funding increases for Transformation and Science and Technology development have been included as part of the President's Amended Budget. The service can best articulate in any discussion pertaining to transformation tradeoff decisions.

The Army's Future Goals was part of the process in the Quadrennial Defense Review which was released the end of September 2001.

Senator INHOFE. I am pleased they made the evaluation, the commitment, and the funding that they did. Senator Warner and I have both had the opportunity to go out and see the reason that it is necessary for us to update our 40-year-old Paladin system, so it would at least be competitive.

General SHELTON. Yes, sir. It represents a quantum leap in capability.

Senator INHOFE. The modernization cuts proposed with the B-2 include installation of the new satellite communication system, Link-16. We have been talking about this for quite sometime, and I understand that in this budget you are proposing to cancel the \$123 million in the B-2 modernization funding. I was surprised when I saw this, after the performance that we witnessed with this, and the criticism of not being able to change missions en route during the Kosovo operation.

Am I accurate on what the budget has on this, Secretary Rumsfeld, and can you tell me what the thinking was behind it in terms of cutting the updating of the B-2?

Secretary RUMSFELD. I would have to look back into that and get back to you on that, unless, Dov, do you have that?

Dr. ZAKHEIM. No. We need to look into it.

Senator INHOFE. Good. Well, perhaps it is not true, then. I would certainly, again, like to have that answer for the record.

[The information referred to follows:]

We are not proposing to cancel the B-2 Link-16 Program. We do have an unfunded requirement of approximately \$48 million that would continue the development efforts that will provide battlefield situational awareness for improved survivability and flexible retargeting. It is my intention to fully fund this program in the Fiscal Year 2003 Budget Request.

Senator INHOFE. Thank you, Mr. Chairman.

Chairman LEVIN. Thank you very much.

Senator Lieberman.

Senator LIEBERMAN. Thanks, Mr. Chairman.

Secretary Rumsfeld, thanks for your testimony. Let me say first that I am pleased to see that the budget that you and the President are offering us today, despite the fact that it is a place-holder, does build on the bipartisan efforts in this committee and Congress over the last year to regain real growth in defense spending. This is the first time we have done this since the mid-eighties, and I am pleased that this budget includes an increase over last year.

Although we have not seen the details, and therefore it is pretty hard to endorse them, I applaud the increase that you are recommending and I will support it. In fact, in looking over the material we have so far, I think the increase in defense spending which the President and you are recommending is actually too small to meet our national security needs.

While it does make much-needed progress in quality of life, in compensation, and in restoring deteriorating infrastructure, I do not think it meets the goals of bolstering readiness and transforming military capabilities. Resources to support OPTEMPO are flat or down in the categories you have shown us so far, such as flying hours and tank training miles.

I think it was General Patton who once said, "first-class training is the best form of welfare for the troops," meaning it is another aspect of quality of life. I think the budget, so far, falls short there.

Also, after factoring in increases for the ballistic missile defense, spending for research development, testing, and evaluation appears to be no better than flat. Basic research and advanced research, the source of the technology we will need to transform the entire military, is flat. It is well below the goal of 3 percent of the budget, which itself, I think, is too low, and that is not consistent with your transformation goals.

I am also very concerned that procurement spending in this budget is not what it should be, even after accounting for additions from transferring missile programs from the Ballistic Missile Defense Office to the Services. Even if the QDR concludes that we will not transform our force, which I hope it does not, we nonetheless must modernize. One independent analysis, one of many that have suggested this, was done by the Center for Strategic and Budgetary Analysis headed by Dr. Krepinevich, and concluded that modernizing the existing force on the current schedule would require between \$65 and \$85 billion per year, or \$5 to \$20 billion more than is in this year's procurement budget. Accelerating the schedule would require \$75 to \$95 billion per year, or between \$15 and \$35 billion more than is in this year's budget. Even cutting the current force and modernization programs could cost \$65 billion per year, which is \$5 billion more than you have in this year's budget.

The fact is that bold transformations, such as the one I think you are hoping for and which I agree with, will add substantially to those estimated cost increases. So as I said at the outset, I endorse the defense increases that you propose. I would personally support a larger increase, because I believe that is necessary to keep the American military dominant into this new century.

Let me ask you about two of the points that I have just made. On procurement, do you agree that we need more, whether for a

transformed or modernized force, than the amount you have requested for procurement?

Secretary RUMSFELD. Yes, sir. The goal for procurement, as you will recall, in recent years has been to get up to \$60 billion. In 2001, with the supplemental, it will be \$62 billion. In 2002, we are proposing \$61.6 billion, so it is quite close, but I agree with you that it is not at a level of increase that would modernize the force.

In regards to OPTEMPO, it is a matter of choices. The Air Force, for example, has an increase, whereas the Navy and Marine Corps took a slight decrease, as they chose between things with finite resources.

With respect to research, development, testing, and evaluation (RDT&E), the number actually is up from \$41 billion to \$47 billion, with some focus on transformational R&D, countering unconventional threats to national security, improving RDT&E test range infrastructure, reducing cost of weapons and intelligence systems, and OPTEMPO. It is uneven. The Army's flying hours, you are quite right, went down from 14.5 to 14. The Navy, on the other hand, went up from 17.8 hours for their tactical air forces to 22.6. The Air Force held level at 17.1 in terms of flight hours.

The tank miles are different. They actually did go down, as you suggested, from 800 to 730. The Army made those kind of choices. The National Training Center stayed level at 97, and the ship operations stayed exactly level at 15.5. So it's a mixed bag, some up, some down, and some staying right where they were on OPTEMPO.

Senator LIEBERMAN. Let me address the first part of your answer, if I may, Mr. Secretary. As I gather, you agree that in the best of all worlds we should be spending more on procurement. Did you request that through the budget process of OMB?

Secretary RUMSFELD. We certainly presented to the Office of Management and Budget and the President the budget that we felt would be desirable for the Department. The process then is, as you well know, for them to look at all their needs, social security and various other things that are going on in the government, and come to a conclusion. This is where we came out. It is the largest increase since 1986, 7 percent in real terms, as I understand it, and yet it is not sufficient to dig us out of the hole that we have been digging ourselves into for the past 5, 6, or 7 years.

Senator LIEBERMAN. So, it is fair to presume, in the normal course of the budgetary exercise, that you did not get everything you wanted.

Secretary RUMSFELD. Seldom do.

Senator LIEBERMAN. Therefore, there is some room for this committee, hopefully, to make some independent judgments about the budget.

I would just say briefly, in response to Mr. Chairman, on the RDT&E, it is true that there has been a substantial increase. However, as I look at it, most of it, not all of it, is in the defense-wide area, which is mostly missile defense and increases to the services. Except for the Navy and Marine Corps, it is not great.

The one part I do want to focus on, and I hope the committee can take a separate look at, is the science and technology budget. The total for this year is \$9 billion, and you are recommending \$8.8

billion. I don't think we are going to be able to do what we need to do unless we are investing in the technologies of the future.

I have gone over my time. Thanks, Mr. Chairman.

Chairman LEVIN. Thank you very much.

Secretary RUMSFELD. Senator Lieberman, actually, on RDT&E, the Army is up from 6.3 to 6.7 billion, the Navy is up from 9.4 to 11.1, Air Force is up from 14 to 14.3, and defense-wide is 11.3 to 15.3.

In regards to transformational R&D, there are any number of items, including Global Hawk, Future Combat System, digitization, joint tactical radio systems, and several others.

Chairman LEVIN. Thank you.

Senator Roberts.

Senator ROBERTS. General Shelton, well done, sir. Thank you.

General SHELTON. Thank you, sir.

Senator ROBERTS. At about 3:30, Mr. Chairman, I thought I had arranged a B-1B flyover from McConnell Air Force Base—
[Laughter.]

—to fly about 30 feet over the Senate Office Buildings and perhaps over the Pentagon.

That is a poor attempt at humor that perhaps Senator Cleland would enjoy—a little black humor.

I am discouraged, I am frustrated, and I am angry, Mr. Secretary. More to the point, the men and women of the 184th Bomber Wing in Wichita, Kansas, at McConnell Air Force Base, share my discouragement and my frustration. I do not know if they are angry. They should be, and I will tell you why.

At our last hearing, I asked you to include Congress as you go forward with your transformation. I believed your stated resolute position to review transformation recommendations carefully before decisions were made.

I was very disappointed—that is not strong enough. I will not tell you how strong I felt on Tuesday when, without discussion from Congress of any kind, no consultation, and from my view, with little close review by senior leaders in the DOD, the decisions to significantly reduce the B-1 bomber fleet and take the B-1 bombers from Georgia, Idaho, and Kansas, and put them in South Dakota and Texas was announced.

Dr. Zakheim, your able assistant there, told staffers that evening that the way this was handled by the services was a model of what DOD is trying to do to cut excess. I sure as heck hope this is not a model on how you are going to consult with Congress.

I have been quoted as stating that I thought that politics may have played in the decision to place the B-1's in South Dakota. Why would I say that? I do not think that this Secretary is going to do that. I did not think anybody in the Air Force would do that.

Well, I said it because I have here a political impact statement from the United States Air Force, and it says here, in regards to Texas, the home State of POTUS—I do not know of any Senator named POTUS. [Laughter.]

I do know of a President by the name of Bush whose home State is Texas. Then the political impact says, Senate Majority Leader, home State of South Dakota.

It gets to Georgia, it gets to Idaho, and it gets to Kansas, and you do not find any mention of Senator Cleland, Senator Roberts, Senator Craig, or Senator Crapo. I do not know what doofus over at the Air Force put this out, but if there is a political impact, why he put it on a piece of paper is beyond me.

I am angry because of the apparent piecemeal approach to transformation that this represents lack of any coordination with Members of Congress. Will other programs receive the same consideration? Will the Senators from affected States and on this committee find out one morning of the Navy's decision to reduce or cut the DD-21, or the Army decides to cut the Crusader? Maybe we are moving from 10 Army divisions to 8.

We cannot have a piecemeal approach to our transformation. These actions to cut or reshape major weapons systems must be part of an overall plan, and Congress must be included.

I am going to make every effort—you know this, we have talked about it—to stop any movement of the B-1B aircraft until I am confident, and Senator Cleland is confident, that this decision fits into our national defense strategy, has had the proper review, and every aspect of such a decision has been considered. I will do the same for any decision on any major weapons system if the proper reviews have not been made.

I would appreciate your comments, sir, on this recently announced decision on the B-1 platform, including the time line for such action and the choice for the locations of the remaining B-1Bs. Please include how future weapons system decisions will be coordinated with the Members of Congress.

You do not have to answer that right now. You have in your possession somewhere in the Pentagon a letter sent to you by myself, Senator Cleland, Senator Miller, Senator Brownback, Senator Craig, Senator Crapo, and about eight or nine Members of the House of Representatives.

We point out that you have correctly indicated that the global environment will likely include limited access to overseas bases and require a strategy dependent more on long-range precision strike. That is correct. This is the primary mission of the B-1 bomber. It is being plussed up in terms of offensive capability, so that cannot be a consideration.

In terms of the strategic portion of this, I do not understand it. In terms of the cost-benefit, I really do not understand it. The Kansas Air National Guard has made a historic mission-capable rate of an average 15 percent higher than an active duty at 25 percent less cost per flying hour. They do it better than any other outfit in the United States from a cost-benefit standpoint, and that is not all.

We have a General Accounting Office (GAO) report—if I can separate it from the other reports—which is approximately 1 year old, and basically says that we made a good decision in turning over the B-1 to the Reserve and the Guard. It discusses the exercises in Kosovo and Operation Desert Fox, which proved the value of the B-1 as a solid long-range performer and validated the CINC's option to provide combat punch without the arduous basing problems that other short wing, short-range weapons endure. That is a GAO report.

I have a Congressional Research Service (CRS) report saying the same thing. General Shelton just said we have aging aircraft—do not come around with that damn note [Laughter.]—

—under the B-52, the B-1, and the B-2, and we compare very favorably, if not more favorably, to the B-52 and the B-2. Let me quote Gen. John Michael Loh at a Pentagon press briefing. I will just sum it up.

Throughout this test, we have proved the B-1 can pack up, go anywhere in the world, and put bombs on target at the combat readiness rates we need and expect. It is, and remains, the backbone of our bomber fleet.

In response to our letter, you indicated that McConnell Air Force Base loses all nine B-1s—no, you did not indicate that; that was your original statement—and opens up 832 manpower authorizations. I think there is 1,300, but if you say there is 832, that is better.

Then, the day after we raised a fuss and said that we lose all nine B-1s, we were going to find new missions. These people have 15 to 20 years of experience. They have flown in every aircraft imaginable. I do not know what kind of a new mission they are going to find in Wichita. I am for that. God, don't take that away.

We want some answers. We want some answers on the strategic side and on the cost-benefit side. Mr. Secretary, if this is the way we are going to be consulted with in regards to transformation—I thought we were going to have a situation where we got well first, then consult with Congress for transformation, and then go to the QDR. I think on a bipartisan basis, everybody here would support that. This is not the way that this should happen.

Now, I am way over time. If you would like to say something I would like to invite your comments.

Secretary RUMSFELD. Well, Senator, I would begin with a very sincere apology to you and Senator Cleland. There is no question that it was not handled well. The Air Force made this recommendation and it was executed. Unfortunately, the Secretary of the Air Force was out of the country, and the handling of it was not well done. I apologize for it, and I do not know what else I can say.

With respect to the details and specific questions you have raised, we will certainly take the time and sit down and get the specific answers and look at it in the context that you requested.

Your general comment about how the weapons systems were going to be handled is exactly correct. It is exactly what I said when I was last before this committee. It is exactly how it has happened, and the normal order of things is that these issues are being addressed in the Quadrennial Defense Review. They will be addressed in an orderly way, in context with each other.

Finally, with respect to how it is possible to consult, what I suppose we could do—I have not really thought it through as to exactly how we can consult with the House and the Senate Armed Services Committees and the Appropriations Committees who have the particular interest in these subjects. But there is no reason at all that we cannot find periodic break points in the QDR process and offer opportunities for Senators and Members of the House to become aware of how the progression is going.

At some point somebody is going to make a recommendation on all of these weapons systems that are coming down the road, and at the point that a recommendation is made, one would hope that they would be looked at together, as you properly suggest is the desirable way to do it.

Ultimately, a decision will get made, and someone is going to like it, and someone is not going to like it. All I can do is express the hope that when those decisions are made, we will have looked at them in a manner that is satisfactory to the Members in terms of the quality of the process, and that we will have made, particularly members of this committee and the House committee, knowledgeable about how that decision is evolving and what the arguments are so people are not blindsided badly, the way you and Senator Cleland have been. Again, I apologize.

Senator ROBERTS. I appreciate that. Thank you, Mr. Chairman. Chairman LEVIN. Thank you, Senator Roberts.

Senator Cleland.

Senator CLELAND. Mr. Secretary, I am here to say that the emotion, the feeling, the rage expressed by my dear friend from Kansas is bipartisan, deep, and profound. This decision on the B-1 bomber and the way it was handled looks to me like a mackerel in the moonlight. It both shines and stinks at the same time. After all, it was the Reagan-Bush administration that cranked up production of the B-1 bomber in the first place, and after the Cold War was over, the country no longer relied on the triad of missiles, submarines, and bombers to retaliate in the case of nuclear attack.

Then President Bush, Secretary of Defense Cheney, and Chairman of the Joint Chiefs of Staff Powell found a new role for the B-1. It is as the Senator from Kansas suggested. It would no longer be massed in the center of the country to protect it from enemy attack and preserve precious minutes in response time for take-off under a nuclear strike scenario. It would be dispersed and given a conventional role of supporting forces deployed around the globe. It would be dispersed west to Kansas and Idaho for quick response to Pacific and Asian theaters. It would be deployed east to Warner Robins Air Force Base in Georgia for quick response to action in Europe, the Middle East, and the Balkans.

Its dispersion meant a quicker response to a changing global environment, and a reduced chance of a terrorist or sabotage attack to knock out the force centered in one or two sites. Although the B-1 bomber saw limited action in both Desert Storm and the Balkan War, it still serves as the Nation's only supersonic bomber capable of conventional and unconventional missions.

Additionally, the decision by the Bush administration committed the Air Force to build up extensive infrastructure to support the B-1 bomber in its new dispersion plan. This was offset, in one way, by letting the Air Guard maintain and operate the bombers in two States: Kansas and Georgia. This became a very effective means of accomplishing the B-1 bomber task.

The two most cost-effective B-1 bomber wings in the world are the two run by the Air Guards of Kansas and Georgia. As a matter of fact, the GAO report the distinguished Senator from Kansas referred to in 1998 says whether the Air Force chooses among our options or develops options of its own, we believe millions of dollars

could be saved without reducing mission capability by placing more B-1s in the Reserve component. Therefore, we recommend that the Secretary of Defense direct the Secretary of the Air Force to prepare a plan to place more B-1s in the Reserve component and seek congressional support for the plan.

As the Senator from Kansas states, the National Guard B-1s have a mission-capable rate higher than that of the active duty Air Force. The Air National Guard B-1 units have a lower flying hour cost than the active duty Air Force B-1s. At Warner Robins in particular, \$100 million was committed over a period of 10 years to bed down a B-1 bomber wing. Some \$70 million has already been spent in that effort. Recently, a \$40 million brand-new hangar was completed. Ironically, the two newest facilities for the B-1 bomber and the two most cost-effective facilities for operating a B-1 bomber wing are the very ones you want to shut down.

I think this puts us back in the Cold War mode, puts us back where we were before President Bush, Dick Cheney, and Colin Powell made the decision to embark on the policy we have lived with for a decade.

Now, walking away from \$100 million in brand-new infrastructure and cost-effective operations does not seem to be a formula for saving money. I would like to know, and I would like for you to explain to this panel, why did you go against the GAO recommendation, and why did you make this decision?

Secretary RUMSFELD. Senator, the decision was made by the Air Force, and the logic of it is that they wanted to go from 93 B-1 bombers down to 60 B-1 bombers and change the basing mode from five down to two to save funds. They wanted us to use those savings to upgrade the remaining B-1 bombers.

It is an interesting footnote in history, I was the Secretary of Defense in 1976 who first approved the B-1 bomber. It was later canceled by the Carter administration, as I recall, and then reinitiated in the Reagan period.

Senator CLELAND. I will ask the GAO to take a new, independent look at this decision, to give this Senator and this committee an objective analysis of where we are with the B-1 bomber program and the suggestions as to where we should go. Any decision regarding the B-1 bomber program should strengthen the security of the Nation, not weaken it, and I will be going to Warner Robins tomorrow to see for myself what the facts are.

Thank you very much, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Cleland. Senator Warner is yielding very graciously.

Senator REED.

Senator REED. Thank you very much, Mr. Chairman. I would like to first add my commendation to General Shelton for his great service to the Nation.

General SHELTON. Thank you, Senator.

Senator REED. One would expect nothing less from a former Brigade Commander in the 82nd Airborne Division.

General SHELTON. Thank you, Senator.

Senator REED. If I may, Mr. Secretary, let me follow up with a line of questioning about national missile defense that Senator Levin began.

My understanding of your response is that as we look forward in this budget cycle, the Ballistic Missile Defense Office will be involved in intensive, aggressive research activities. If those activities present opportunities, those opportunities will be exploited even if they violate the ABM Treaty.

Secretary RUMSFELD. Let me clarify that. The President has said that he does not want to simply give notice under the treaty, which is permitted, a 6-month notice, and then go on his way, apart from Russia. He has said he would much prefer, and told President Putin this, that he would much prefer to work with the Russians and see if they cannot come to some understanding of a new framework with respect to the relationship that goes beyond missile defense; one that includes reductions in strategic offensive forces and looks at proliferation and counterproliferation. That is his hope. That is his intention.

He has also said that he intends to have a ballistic missile defense capability for this country and for our deployed forces overseas, and to the extent friends and allies want to participate, fine.

The treaty is inconsistent with his goal of having the ability to protect population centers and deployed forces. Therefore, he has said he wants to set it aside, or get beyond it, and establish some other framework. That process is underway. It was started, as I said, with the President's meeting with Mr. Putin. The two of them have agreed that the Ministers of Foreign Affairs and of Defense will meet. We are supposed to begin that process of discussions at some point in the period immediately ahead.

The President has also said that he does not intend to give a veto to Russia over whether or not the United States has the capability of defending its populations from ballistic missiles, so I think the way to think of it is that the R&D program is going forward. There is a compliance, the law exists, the treaty exists, and the President does not intend to violate the treaty. The President intends to set a process in motion to discuss with the Russians how we get beyond it.

Now, clearly, if they are unwilling to do anything to get beyond it, the President has indicated that therefore he would very likely give notice to the Russians and allow the 6-month period and go ahead and do the research and development that is inhibited by the current treaty. But that is not his intention, that is not his hope, and I must add, it is not his expectation.

Senator REED. Thank you, Mr. Secretary. Let me turn to a more specific issue with respect to this area of national missile defense. There was a story today in the *Wall Street Journal* that a contract has been prepared for the construction of an interceptor site near Fort Greely, Alaska. Has this contract in fact been prepared, and are you entering into discussions with a contractor to construct a facility at Fort Greely?

Secretary RUMSFELD. I saw the article and I asked about that. My understanding of that situation is that there is a contract that is in the process of being prepared. It does involve Alaska. It involves site preparation, and to my knowledge, it would not violate the treaty—correction, it would not constitute an act that would be beyond the permitted acts under the treaty, I am advised.

Senator REED. This approach sounds similar to an option that General Kadish briefed to the committee earlier this month, to have up to 10 test missiles available for operational deployment using an upgraded existing radar on Shemya Island in Alaska. Does this budget contain funds to upgrade that radar or to build the interceptor silos in Alaska, beyond the issue of the contract preparations?

Secretary RUMSFELD. As I indicated to Senator Levin, General Kadish, which was perfectly proper, briefed the committee on his thinking prior to the time that he had firmed up his research and development plans. Those plans have not been firmed up as of this moment, nor have I been briefed on them.

You are exactly right. In his set of options, one of them involves the possibility of upgrading an existing radar in Alaska and putting some number of interceptors in silos in Alaska. To go back to Senator Levin's question, I am told by the lawyers that there is a debate among the lawyers as to whether, if you actually did those things, as opposed to just site-clearing, whether or not that would constitute going beyond what the treaty permits. There are lawyers on both sides, and apparently, part of the issue involves intent.

If it is intended that it be a test bed, apparently more lawyers than not believe that would not exceed the treaty. If it is intended not to be a test bed but possibly a prototype of some sort, then some more lawyers would switch over and say, "well, maybe that might be."

The problem is, I am not inclined to get into that business. I am not a lawyer. Why does the United States want to put itself in a position where someone can say, "you violated the treaty," or "you did not violate the treaty," and one lawyer argues with another lawyer? We want to get into the discussions with the Russians, get the treaty straightened out, and get a new framework that gets beyond that so this country can go forward and do what the President has indicated he would like to do.

Senator REED. My time has expired. Thank you, Mr. Secretary.

Secretary RUMSFELD. Thank you, sir.

Chairman LEVIN. Senator Akaka.

Senator AKAKA. Thank you, Mr. Chairman.

Mr. Secretary, I am particularly interested in your request to raise the threshold for contracts subject to Davis-Bacon wage requirements from \$2,000 to \$1 million. Your request states this policy would lead to a savings of \$190 million in fiscal year 2002. I am concerned about the impact that your proposal would have on local economies and businesses.

The question is, what assurances can you provide to mitigate the negative impact this would have on Federal workers and local economies? What steps would the Department take to avoid the problems experienced by States who have repealed prevailing wage laws, which include cost overruns and change orders, to correct mistakes in poor workmanship?

Secretary RUMSFELD. Senator, I would like to ask Dr. Zakheim, who has been working on this specific issue, to respond to your question. Thank you.

Dr. ZAKHEIM. Senator, the Davis-Bacon Act has been around for quite some time. At the time it was enacted, \$1 million was an

awful lot for a contract, I believe. We are now talking about contracts much, much larger, and so a \$1 million contract today is really a relatively small contract. That is one point.

Second, the questions you raise are extremely to the point, and there would certainly be efforts to mitigate the kinds of impacts you are talking about. But clearly at the present a \$2,000 contract is not terribly much. Most contracts are well above that, and effectively it means that in no circumstances, barring very, very minimal ones, can the situation take place where one pays non-union wages to non-union workers.

We are trying our best to find a variety of management reforms. We know \$190 million is a significant amount, and at the same time, we take your concerns under advisement. There are people looking at those.

Senator AKAKA. General Shelton, I agree with your goals for sustaining a quality force. I believe we need to address the quality of life for our service members and their families to increase pay, improve housing, reduce out-of-pocket expenses, and improve health care for our military retirees. I share your concerns regarding the deteriorating infrastructure and its impact on readiness and the quality of life for service members and their families. I support your efforts to address this situation.

Given your identification of modernization as your biggest priority, my question to you is, do you believe that the fiscal year 2002 budget adequately addresses this issue?

General SHELTON. Thank you, Senator, and thank you for your support on those very key issues for all men and women in uniform. I believe that the fiscal year 2002 budget is a very prudent interim budget. It puts people first. It makes sure that we have fully funded our current readiness, which is very important. As I have said so many times before, when our Armed Forces are needed, we do not have time to ask, "Are you ready?" It is normally time to go.

The modernization and the recapitalization, as I indicated, are still an issue. However, the QDR process right now is addressing where we go in terms of capitalizing, modernizing, and transforming. Out of that process now we should come out with a blueprint, a road map for the way ahead, and see where we are going to need the significant plus-ups in the modernization and in the transformation accounts.

As indicated earlier by one of your distinguished colleagues, the estimates on how much that would be are still to be determined. I think out of the QDR we should have a better figure for what that total amount is going to be, where it should be applied. The estimates, of course, have ranged from \$50 to \$100 billion. It is a wide range. I think the QDR will help us to start focusing that effort and have it ready to go in the 2003 budget.

Senator AKAKA. Thank you, Mr. Chairman.

Chairman LEVIN. Thank you very much, Senator Akaka.

Senator Carnahan.

Senator CARNAHAN. Thank you, Mr. Chairman. First of all, I would like to note that General Shelton will be retiring in September. I would like to express my gratitude for the patriotism that you have shown, and for all you have done in the interest of peace

around the world. Certainly, the American people owe you a great debt of gratitude, and I thank you very much for that.

General SHELTON. Thank you very much, Senator. It has been my honor.

At this point, I would like to offer my statement for the record.
[The prepared statement of Senator Carnahan follows:]

PREPARED STATEMENT BY SENATOR JEAN CARNAHAN

Thank you Mr. Chairman. I wish to welcome Secretary Rumsfeld, General Shelton, and Dr. Zakheim. I am very pleased that this committee will begin considering 2002 Defense Authorization and engage our Pentagon leadership in a substantive dialogue about the defense budget.

I am dedicated to providing a strong national defense and intend to do what is necessary to ensure we have the best equipped and best prepared fighting force in the world.

To begin with, we need to develop a suitable framework for responding to emerging threats around the globe. We need to develop a force structure that shifts our current focus on Cold War areas of concern to 21st century dangers emanating from Central and East Asia. In addition, we must be prepared to confront asymmetric threats from rogue nations and terrorist organizations. To meet the challenges of the future, we need to expand our capabilities in cyber-warfare, rapid reaction tactics, and early warning intelligence. Achieving these goals will require sizable investments in several areas, including airlift assets, research and development of new technologies, and expansion of our modern long range bomber fleet.

But above all else, it is essential that we take care of the most important resources in our arsenal—our men and women in uniform. This year, I hope that the Department of Defense takes special care to ensure that the 2002 defense budget addresses critical shortfalls in personnel's quality of life—this means long overdue investments in housing units, health care facilities, and education benefits that are so crucial to the retention of our service men and women and their families.

It will be a difficult task to meet our pressing needs within the confines of the Budget Resolution, but I have great confidence in the leadership of Senators Levin and Warner and look forward to working closely with them as well as with Secretary Rumsfeld and the Pentagon leadership.

Senator CARNAHAN. I would like to now address a question to General Shelton. In your remarks you emphasize key advancements in our military health care system. I agree with your statement that our commitment to health care must extend to personnel and families of retirees. I supported last year's initiative and hope we can continue developing these programs.

In addition, I hope that this committee, as well as the Pentagon, will evaluate our commitment to this component of our Armed Services. Indeed, we have increasingly come to depend on our Reserve components in almost every major deployment abroad. As a result of the post-Cold War downsizing, we have now maintained fewer active forces in our military, while we continue to expand our commitments around the world. Would you describe the expansion of our Reserve component's role in the total force since the Gulf War ended in 1991?

General SHELTON. Senator, our use of our Reserve components, and I might say great Reserve components, because they do yeoman's work day-in and day-out around the world, both the National Guard as well as the Reserve Forces, has become quite extensive. In fact, I was just in the Balkans this last month, and every time I go I am reminded, whether it is in Operation Southern Watch at Prince Sultan Air Base, or Northern Watch at Incirlik Air Base, wherever I go, the Reserve components are a key part of the force.

I want to say that roughly a third of those at any given point in the Balkans come out of the Reserve components, and so we

have been demanding a lot of them. In some cases, in our civil affairs, the percentage of our force that is actually in the Reserve components, which we use civil affairs an awful lot, is 96 percent. In psychological operations it's about 67 percent, and so we are forced to go to the Reserves a lot, given the types of operations, particularly the long-term commitments that we have, like in Bosnia, Kosovo, and the Sinai, to a great degree. That has been a concern.

I have discussed that with the Chiefs of our Reserves, and the National Guard. They have some concerns about it, although they do not think that we are in a crisis yet. But certainly as a part of the Quadrennial Defense Review that has got to be something that we do address and plan to address as a part of the look at the total force, and whether or not we have the mix right in the Guard and the Reserve.

Senator CARNAHAN. Does the Department of Defense plan to address health care and other benefits for reservists in recognition of their increased contribution to the defense of our Nation?

General SHELTON. Senator, I will have to take a look at that. I do not recall specifically if that was a part of our terms of reference for the QDR or not, but we will look at that and get back to you.

[The information referred to follows:]

The Quadrennial Defense Review process addresses health care and other benefits and was released by the Office of the Secretary of Defense September 2001.

On health care, I want to once again thank the members of this committee for the great support given to our men and women in uniform, as well as our retirees. You made it happen, and it is reflected in everything that I see now in terms of morale, attitude, and recognition and appreciation of their great efforts.

There is still a concern, as we look at health care, that it is an entitlement that competes with ammunition, planes, and ships. We need to try to figure out a way to get that out of the O&M account and into a category of funding that recognizes it for what it is: a must-pay that we pay up front and do not put in the same category with precision munitions.

Senator CARNAHAN. One other question. In your last appearance before this committee, you and the secretary emphasized emerging threats posed by chemical, biological, and nuclear weapons around the globe.

I believe, as you do, that these threats remain imminent. Even as we plan a long-term strategy for dealing with weapons of mass destruction, it is essential that our troops remain sufficiently protected from chemical/biological agents. I hope that the fiscal year 2002 defense budget will sufficiently equip our troops with adequate protection to deploy in a contaminated environment. Has the Pentagon sought to modernize its defense against chemical and biological agents in the short-term?

General SHELTON. Senator, the answer is yes. In the short-term, and certainly as part of our long-term analysis and strategy, that is a growing threat which we know we have to deal with. We have programs and plans in place to do exactly that.

We have made some, I think, relatively quantum leaps in the area of detection, such as our ability to determine what type of agent it is at greater distances than when you are actually exposed

to it. But that is an area we need to continue to press, because obviously it is one of those asymmetrical threats that we have to be very concerned about, and that will be reflected in the priorities of our programs.

Senator CARNAHAN. You have also testified before this committee to illustrate the fact that chemical and biological agents pose a more imminent threat than most other types of weapons of mass destruction (WMD) attacks. Do you anticipate substantial increases in long-term investments in chemical/biological defenses equivalent to other investments in WMD defense?

General SHELTON. I will respond for the record for that, because I need to go back and look at it in terms of the nature of your question. Certainly, those are programs that we have to have funded. They are very important programs. In terms of the percentage of increase relative to the others, I will have to go back and check the figures on that, and I will respond to you in writing.

[The information referred to follows:]

Our troops are equipped with the most modern defense equipment capable of providing more than adequate protection against traditional chemical and biological warfare agent attacks. The President's budget will provide improved chemical point and standoff detection capabilities, and continue research to improve protective ensembles and masks, medical, chemical, and biological countermeasures, and decontamination technologies. Always cognizant of emerging chemical and biological warfare threats, we continue to modernize and upgrade our equipment to maintain the highest standards of protection and to meet the challenge of future military operations. The DOD Chemical and Biological Defense Program is committed to maintaining the proper balance between the fielding of state-of-the-art equipment and continued investments in science and technology programs. The ongoing QDR is assessing our future requirements for countering nuclear, biological, and chemical weapons and means of delivery to include passive defense capabilities, both for military operations overseas and in support of civil authorities.

Senator CARNAHAN. Thank you very much.

General SHELTON. Thank you.

Chairman LEVIN. Senator Bill Nelson. According to the list that I have, Senator Bill Nelson is ahead of Senator Ben Nelson.

Senator BEN NELSON. Just on this. [Laughter.]

Senator BILL NELSON. I will hold my tongue.

It is kind of interesting; two Nelsons, both freshmen, both Democrats, both former insurance commissioners. He likes to think he is from the State with the football team, but I reminded him that Florida has six professional football teams. [Laughter.]

Chairman LEVIN. I think we are not going to go there.

Senator BILL NELSON. Not only in the NFL, but also the Gators, the Seminoles, and the Hurricanes.

Mr. Secretary, I said to you a couple of days ago that you have a tough job. I think you are doing a good job, notwithstanding the anger of Senators Roberts and Cleland, which is quite understandable. I think you are trying to get your arms around a behemoth and bring some rationality to it, and redirect our force structure to meet the challenges for the future. I want to commend you for that, as I said a few days ago.

I would like to discuss what we explored the other day, but with a slightly different angle. I notice that Senator Stevens has inserted this in the supplemental appropriation which we will be voting on probably tomorrow: "notwithstanding any other provision of law, the Secretary of Defense may retain all or a portion of Fort

Greely, Alaska, as the Secretary deems necessary, to meet military operational, logistics, and personnel support requirements for missile defense."

My question is, picking up on what we had discussed the other day, how can you start to deploy something that has not been developed? You and I discussed that we want to continue robust R&D, and then you go about testing, but you cannot deploy something that is not developed.

There are certain lead times that you need, obviously, in preparation of ground and so forth, but then you get to a point that you have to start building silos. I would like your comment in light of the fact that it is a generally accepted principle in the Nation's defense that you cannot deploy something that is not developed.

Secretary RUMSFELD. Yes, sir. First let me say that I am not familiar with the language that you mentioned that may be in the supplemental. I can comment on the remainder of your question.

To test something, you frequently need to do something in the ground, and the single missile defense activity that was the furthest along was the one that the Clinton administration had planned to go forward with in Alaska. That concept was to have a radar and have some interceptors in the ground, in silos, in Alaska. That particular model was the one they were working on, to the exclusion of things that might, at some point, lead to a breach with respect to the treaty.

You are correct that lead times become quite important. Apparently, in that part of Alaska there are 2 or 3 months, at the most, when you can do any kind of construction. It is not a friendly, hospitable environment for construction. The site preparation and the shipment of materials has to go up and be there during that brief period when the weather permits it.

Second, they have to go up there, I think, a year in advance so that they are there when the actual time when something is permitted.

Senator BILL NELSON. All right. All of that is understandable, Mr. Secretary, but let's get on to the question, are the interceptors, in fact, developed?

Secretary RUMSFELD. The decision to do what you are describing has not been made. There has not been a decision made to deploy in Alaska. Indeed, I do not even know if the decision had been made in the previous administration, although it might have been. Someone here can correct me on this, but the intention in the previous administration, or the track they were on, was to, in March or April, I believe, ship up to Alaska the materials they would need for the radar and possibly also for some of the interceptor silos. They would not have done that had they not believed that by the time they were able to do that the interceptors and the radar would be available.

The purpose of doing it in the prior administration I cannot speak to, whether it was a deployment or not. The purpose of doing what they are doing now is something that General Kadish is currently considering. That is to say, whether or not it would be a test bed or a prototype.

Senator BILL NELSON. Let us talk about those interceptors being developed. The theory, you said, is that they would be developed,

and therefore be able to be deployed. Do we have any evidence in any of our R&D and testing now that that kind of interceptor would, in fact, work?

Secretary RUMSFELD. The purpose of, of course, a test bed would be to experiment to see to what extent it would work. My recollection of that particular interceptor is that they do, in fact, have something that is in track that could be used, although there is also, as I recall, an intention to upgrade it. Do you recall, General?

General SHELTON. Sir, you have described it exactly right. It is still being tested. It has worked. However, it still needs additional testing, additional work, and there are more tests scheduled in the next few years.

Senator BILL NELSON. Where is it being tested, General?

General SHELTON. It is part of the Ballistic Missile Defense Organization (BMDO) testing. Specifically where the test sites are we will have to provide for the record.

Senator BILL NELSON. This is not part of the test on the kinetic energy, the one that is launched from California or Kwajalein?

General SHELTON. We will provide you an answer for the record, Senator.

[The information referred to follows:]

In response to your questions about testing, we currently use the range between Vandenberg Air Force Base (VAFB) in California (for launching targets) and the Reagan Test Site (RTS) in the Marshall Islands (for launching interceptors) and it has been useful for developmental testing. However, the range lacks the required realism for tests of BMDS interceptors and sensors. Flight test restrictions on trajectories, impact areas, and debris in space are among the challenges facing the former "National Missile Defense" program, now called the Ground-based Midcourse Defense (GMD) element of the Ballistic Missile Defense System (BMDS).

To increase the operational realism of GMD testing, proposals are being considered to expand our test infrastructure to include additional test assets and additional intercept areas. Because this expansion is still being analyzed, MDA has not yet determined the activities and locations that will be used. The proposals include making use of early warning radars on the west coast and using both the Kodiak Launch Complex in Alaska and VAFB to launch targets. The Kodiak Launch Complex may be upgraded to launch single or dual interceptors. Currently RTS can launch a single interceptor and may be upgraded for dual interceptor launches.

Senator BILL NELSON. Mr. Chairman, you obviously see where I am going. We have all this discussion and hand wringing about breaking the ABM Treaty or maybe not breaking it because it is a test and so forth. But I think it gets back to a basic question of physics, that you have to develop something before you can deploy it. This Senator has not seen that we are at that point which ought to justify Senator Stevens inserting this language in the supplemental appropriations bill. Mr. Chairman, I am going to continue to poke and probe, and General, I would appreciate it if you would furnish that information to me, not only about this specific test that might be applicable to a site in Alaska, but all other tests as well.

Secretary RUMSFELD. Senator, just very briefly, I think you made the comment that you are concerned about deployment. There is not a plan to deploy ballistic missile defense at the present time, and so I do not know quite where you are going with respect to that; there will have to be testing done, there is testing being done, and there will prospectively, depending on which of the R&D programs involved. But there has not been a decision made to deploy

for the purposes of putting in place a system under the theory that it is developed and ready to go.

Senator BILL NELSON. Mr. Secretary, when I start reading language like this, that I am going to vote on tomorrow, I start getting concerned. If we are not going down the road in somebody's mind in your shop about deployment, and if it is only testing, why is it being considered in that location for the testing?

Secretary RUMSFELD. That is the location it has been considered for from the very beginning of that particular R&D project that began back in the prior administration.

Senator BILL NELSON. My response to that would be, why there? Why not continue the testing at the present location?

Secretary RUMSFELD. The reason there is because of the decision that was made with respect to where a potential threat from North Korea might be.

Senator BILL NELSON. That starts to sound like deployment to me.

Secretary RUMSFELD. Well, all I can say is what I have said. Neither General Kadish, nor I, nor anyone I know in the Pentagon thinks they know enough at this time to deploy. I will say that the technology has been tested and in some instances proven very effective. The Arrow system that the Israelis have been working on suggests that the physics are workable, and that they are able to do the things that the Ballistic Missile Defense Office has been working on and believes is possible.

Senator BILL NELSON. Thank you, Mr. Chairman. I look forward to continuing this.

Chairman LEVIN. Thank you, and thank you for pressing these points. They are very significant ones.

Senator Ben Nelson.

Senator BEN NELSON. Thank you, Mr. Chairman. First, I want to thank and congratulate General Shelton on a job well done. I appreciate all your courtesies and the opportunities we have had to get together and your support for our national defense. You are certainly to be thanked and congratulated.

General SHELTON. Thank you very much, Senator Nelson.

Senator BEN NELSON. Mr. Secretary, I have not seen my colleague from Kansas so angry since Nebraska beat Kansas State in football. Nevertheless, I would like to continue the discussion that my colleague from Florida has raised about the difference between development and deployment.

Obviously, there is some difference, or at least I hope there is some difference. Is there a bright line between development and deployment? At what point will a decision be made on deployment, away from development? Will we be surprised, as the trimming of the B-1 bombers surprised us? Is this something that is going to happen incrementally, or will it happen suddenly?

I think that gets to the heart of what my colleague is trying to probe and explore here, and I feel the same way. I do not want to suddenly realize that I voted on something in an appropriations bill that constitutes deployment and not be aware that that is the decision that I made.

Secretary RUMSFELD. Senator, I just cannot imagine something happening suddenly in government.

Senator BEN NELSON. I would agree with you on that.

Secretary RUMSFELD. The situation is that the members of the committee can get briefed on the progress in the ballistic missile defense activities any time they want. They have been briefed on a regular basis, as interested. It is impossible to know how any R&D program is going to evolve at any given time. You cannot know it in pharmaceutical research and you cannot know it in ballistic missile defense research. That is why you do the research, because you do not know exactly how it is going to evolve.

Within the Department of Defense there are technical meanings for the words, and there are definitions of what each stage of a process is supposed to mean. The problem with them is that—I am trying to think of a case that could concern you. Let me see if I can fashion one.

General Shelton can tell you one from the Gulf War, where a project, an activity that was purely in the development stage, was in R&D and it was being tested but it had not been fully developed and it was not ready to go. It had not been deployed, and suddenly we were in a conflict. Because we had this testing capability, it was heaved into the war and used very effectively.

General SHELTON. A couple come to mind, including the Patriot missile system, which still had testing ongoing, and actually improved the capabilities while we were in the 6-month pre-deployment phase, or pre-Desert Storm phase. Another was the Joint Surveillance and Target Attack Radar System (JSTARS) which was still being tested and developed, and proved to be very effective.

Secretary RUMSFELD. The reason I mentioned that is because I wouldn't want someone to come back to me and say, "goodness, back in June of 2001 you said we would not be surprised," because it is conceivable that something like that could happen. A system that was under development could be heaved into a conflict because the need was there, and the value was there. It might or might not work, because it had not been fully developed.

I do not want to get nailed down too tight on it, but certainly anything that anyone could conceive of that would be considered deployment would be something that would be rather well understood by this committee and by us.

Senator BEN NELSON. So there will most likely be a difference between deployment and a decision to deploy, and we will know the difference?

Secretary RUMSFELD. Absent some unusual event like this.

Senator BEN NELSON. Absent a conflict?

Secretary RUMSFELD. Yes, sir.

Senator BEN NELSON. The missile defense system probably would not fit into the same—except for theater-type weapons, although that line blurred on us recently as well. But generally, what you are saying is, we will not end up being surprised that we made a decision to deploy in a budgetary context that we did not have the opportunity to visit with you about.

Secretary RUMSFELD. That is for sure.

Senator BILL NELSON. Mr. Chairman, I would like to ask consent that I be allowed to proceed for 1 additional minute.

Chairman LEVIN. No objection.

Senator BILL NELSON. JSTARS was developed in my home town of Melbourne, Florida. It continues to be located there. This Senator and a Member of the House helped get the initial appropriations for JSTARS. It indeed was one of the stars of the Gulf War, and it deployed to the Gulf War from my home town with a group of civilians.

But that is not an equal comparison to what Senator Nelson was speaking about. In that case, we were in the midst of a conflict. In this case, we are talking about a whole new system of strategic importance that involves applicable treaties, and I think that we need to make that distinction, Mr. Chairman.

Thank you.

Secretary RUMSFELD. I quite agree. I was not suggesting it was on all fours with that.

As General Shelton just reminded me, Alaska was supposed to be the first deployment site by the Clinton administration because of the North Korea issue. That construction had to start this year in March, the shipments had to start this year in March to meet the, he thinks, 2005 date for actual effectiveness and deployment, because of short construction periods.

Chairman LEVIN. Senator Warner.

Senator WARNER. Thank you. Mr. Chairman, I want to thank you again for accommodating our side in the course of the afternoon here, and I appreciate your courtesies.

I would just say to our two new members who are preparing to depart, I can assure you that we will not, as a Nation, get to the point of deploying anything before such time as our President has resolved one way or another these treaty issues with Russia. So sleep well, and we are going to be all right. But I also say, if someone were to have an accidental firing or a rogue firing of a missile, I do not know who might be President, but I hope he would bring together everything we have to stop and blunt the next one that might come this way. We have a good system of government, and it will respond well in time of need.

Gentlemen, I am going to go to some broad questions here which we would normally reserve for the posture hearing. It is a great credit to you, Mr. Secretary, to General Shelton, and to Dr. Zakheim, that three-quarters of the members of this committee attended this hearing today. It is a day when we have some of the most intense activity going on on the Senate floor including party caucuses.

I want to go back, Mr. Secretary, to the years when I was privileged to be chairman, and we were endeavoring in a bipartisan way to try and address readiness in particular. We turned to the service chiefs, and they came before this committee, as General Shelton well knows, for two successive fiscal years and told us of their professional opinion. That is clearly established by this committee as a duty owing to the committee and, indeed, to Congress at the time they are confirmed. Each service chief, as part of the record, rendered a professional opinion that we, the United States, should be spending greater sums on our defense. Largely at the initiative of this committee, joined by the balance of Congress, we were able the last 2 fiscal years to begin to turn around the declining defense budgets.

General Shelton, I want to pay a special tribute to you, because you led that effort in many respects, and the other Chiefs joined in that effort. I happen to know, Mr. Secretary, that you strenuously tried to get dollars for the 2001-2002 budget in excess of what has been announced by our President. Because you value the consultation and confidence of sharing your views with your President, I will not ask you to comment on that. But I know as a fact, and this record should reflect it, that you worked arduously with the Office of Management and Budget to get a higher figure for 2001 and 2002.

But we are where we are. We are going to have to do our best, but I am going to recommend to our chairman, he will probably do it on his own initiative, that in due course we have the service chiefs up to address what Senator Lieberman said. It was his judgment. This is a bipartisan thing, not partisan in any way. We are still short, and we will ask the chiefs for the marginal differences between what appears to be coming along in 2001 and what they need. In 2002 there is some certainty as to how these Budget Committees are going to deal with the 18-and-a-fraction billion.

I am optimistic, but until such time as that gavel falls in those committees and the Senate acts, there is going to be some doubt. General Shelton, my record shows that last year the military services indicated that they wanted a \$48 to \$58 billion funding increase per year over the Future Years Defense Program (FYDP) as it existed then, if the Department is to restore readiness and modernize for the future.

I think we have to recognize that readiness is a crisis across the board in our military, and I do not use that word ill-advisedly. You cannot comment, nor should you, on higher figures that you have requested, but clearly if the Chiefs were correct last year, and I will pass this question momentarily to the General, there is a shortfall. How is that going to impact on your prime responsibility to deploy our troops when necessary?

I know there is some expectation that we are going to reduce the level of deployments, but I think you should address what clearly is a shortfall in the 2001 and 2002 budgets, and how that is going to impact your ability as advisor to the President of the United States with regard to our deployments and other things of high priority to our military.

Secretary RUMSFELD. Senator Warner, first let me say that the military leadership has been deeply involved in the budget preparation and where we are, not in the total amount, that is for the President and the Office of Management Budget. But certainly with respect to the allocation, I would say that readiness did get a priority, people did get a priority, and where the balancing came out somewhat shorter was with respect to procurement and investing for the future.

Second, I know that the Chiefs will speak their mind, and I want them to. I would say this, however: the readiness issue has to be disaggregated. There is readiness with respect to various types of training. There is readiness with respect to the facilities, and they get ratings as well. There is readiness for the forces that are on the leading edge and have to be ready to go, and there is readiness levels for the forces that have just returned from being on the lead-

ing edge and are in a down period. The other way I think we have to disaggregate it is this, readiness for what?

If the Third Infantry Division is told by the President and Congress, go to Bosnia, and they are doing a great job, and they are ready for that, but their other job is to be ready for a major regional conflict, because they are in Bosnia doing what they have been asked to do and are ready to do, they end up with 28 days training instead of 29 days training, and therefore their readiness level drops.

So if you are asking organizations to do several things, and your readiness standards do not reflect that, they reflect only the one major assignment, then it leaves an impression, it seems to me, that is imperfect, and I am asked, and I think it will be done in the quadrennial review process, that we give consideration to that issue that I have just raised.

Senator WARNER. Let us turn to modernization, because that impinges on readiness. I recognize that you have been under a battering ram today on shipbuilding, and I join in that battering for reasons that are clear, but let us recognize that we need to modernize, and we are, in my judgment, right up at the top level of what we can obtain by way of military spending in 2001 and 2002.

Where are we going to give in this system? Should we diminish the size of our end-strength? Should we make a decision that we are going to have less deployments? Where are we going to develop the cash that is necessary to go to modernization?

Secretary RUMSFELD. The risks that we, the Chiefs, the Chairman, myself, the Under Secretaries and the Secretaries of the services considered, in terms of reference for the Quadrennial Defense Review, were really four. One was the risk about the people. If you do not invest in the people, the heart, then the total capability of the U.S. Armed Forces decays.

Senator WARNER. I agree.

Secretary RUMSFELD. That is a risk that tended not to get elevated with the risks of not being able to meet your strategy, for example, the operations risks of meeting a war plan. Can you meet the requirement? Do you have the requirements? Are the requirements right? Can you have the capabilities to fulfill those requirements so you can fulfill your war plan?

A third risk, which is difficult because it is apples and oranges, is that you have to get up on the table and balance the question of modernization. What do you do about your legacy force, your current force? How do you keep bringing in additional capabilities as you are going along, somewhat better, but of a kind, so that the aircraft age does not get up to the point where the budget is getting destroyed with repair cost and the shipbuilding number does not go all the way down?

The fourth risk was not taking into account that we are in a period of time when technologies are changing. The world is changed, and we need to not just modernize, but transform. We need to invest sufficiently in research and development, S&T, and new capabilities, new systems in intelligence, and in space capabilities, so that we have the ability to deal with the kinds of threats we are likely to face in the period ahead.

If you take all those risks and try to compare them against each other and weigh them against each other, it is an enormously difficult, complex task, and you are right, something has to give. We need savings out of the Department, and at the present time the Department is wrapped around its anchor chain. We simply are so tied up in rules and requirements and stipulations and prohibitions that it is very difficult to manage. There are not many incentives to save any money in the Department.

A captain of a base goes out there, and at the end of a quarter he knows that if he does not spend that money, he is not going to get it the next year, and so the incentive to save is not there. It is not intuitive, but that is what is happening. We have to find ways to fix the financial systems we talked about. The acquisition system is not working right. It is perfectly possible to save money in the Department if we could be freed up to do it.

Senator WARNER. I am going to let you a little bit off the hook. You have just beautifully restated my whole question, and I am not sure I got clearly the answer where the money is coming from. You may be able to bring in some savings through incentives and a few other things, but I am talking about major dollars for shipbuilding, aircraft, and the transformation of the Army with new equipment. Those are significant dollars, and somewhere, somehow, your Department, this committee, and the House Armed Services Committee have to work to solve that problem.

Secretary RUMSFELD. Yes, sir, let me just go directly to it. There are three ways the money is going to come, and probably it will take, I am afraid to say, most of them. The first way is through savings. We have to do a better job, and I believe we can.

A second way is for something to give among those four risks. We have to make tradeoffs, just like any business does, just like any family does. We have to look at it and say, how much are we willing to give up today in exchange for investing in the future? Are we willing to give up on the people in exchange for operational capabilities? I think not.

Senator WARNER. No.

Secretary RUMSFELD. I think we have to keep the people.

Senator WARNER. I agree that is not on the table.

Secretary RUMSFELD. A third way, the way it normally happens in our country, let us be honest, is that there is a crisis, a conflict, a major new threat is suddenly on us: North Korea invades South Korea. What did we do? We said we could not afford an \$18 billion budget when it was a \$15 billion budget. Omar Bradley was asking for \$18 billion, they said they could not afford it, and the next thing you knew we had a \$48 billion budget. We could afford it just fine because we were in a war.

Unfortunately, there is a natural tendency on the part of people to not recognize how critically important to prosperity and peace in this world the United States Armed Forces are. They underpin that prosperity and that peace. We are down to 3 percent of gross national product going to defense. If there were a crisis, we would be right up to 8 or 10 in a minute, and we could afford it just fine. The key is to invest what we need to invest, and manage it in a sufficiently sensible cost-effective way so that we do not get in a

crisis because the deterrent is sufficiently strong and healthy that we can dissuade people from doing things that upset stability.

Senator WARNER. I thank you, Mr. Secretary.

General Shelton, last year the Chiefs testified that there are \$48 to \$58 billion additional dollars needed in the FYDP if the Department is to restore readiness and modernization for the future. You recognize there is a shortfall no matter how valiant the Secretary's efforts were to get the 2001 budget augmented, and a very significant figure, in a way, for 2002. We are still short, are we not?

General SHELTON. Senator Warner, I do not think there is any question, this is a budget that does put people first. It keeps the emphasis on the quality of the great force we have and it fully funds the current readiness for this year, something that we are concerned about. If we get called upon today we want to be ready to go, and the budget has \$18 billion plus-up in the current readiness account.

Of course, that also takes into consideration the fact that we have old equipment that is costing more to operate, due to the cost of fuel and other factors. That eats up a lot, but it ensures that we do not have to come back for a supplemental in the middle of the year in 2002, assuming that we do not have some other type of disaster for which we have to use our forces.

The challenge remains, as I said earlier, with recapitalization and modernization. There again, we have the QDR. It is a chance to take a look at our force structure, decide where we need to recapitalize and where we really need to really put the money in order to modernize. I do not think there is any question, when you come out on the other end, that it is going to require additional funds in the outyears, starting in the 2003 budget and going beyond. We have all seen the figures that have come from various studies.

That is, of course, based on today's national security strategy. It is based on today's force structure, and it is said that basically somewhere between \$30 and \$50 billion will be required.

Senator WARNER. So in your judgment, is that over and above the current FYDP levels?

General SHELTON. Over and above the 2002 FYDP level as we look out to the future for recapitalization and modernization.

Senator WARNER. So that is \$50 billion over the 6-year program?

General SHELTON. Sir, the estimates range from \$30 to \$50 billion per year above currently programmed levels. I think when we come out of the QDR, the Secretary and myself will have a better feel for what the exact number will be, based on the strategy and on the force structure to support that strategy.

But I would like to underscore something the Secretary said. We are a global power. We are the only one in the world, and sometimes that gets to be lonely, but we have worldwide responsibilities. It is the great strength of America, and the men and women in uniform that are out there daily, carrying out protecting our national interest, help provide for the peace and prosperity that we have today. It is quite an investment, 3 cents on the dollar. That is what our Armed Forces provide for us today.

Ultimately, if we want to continue to enjoy peace and prosperity, be recognized as a leading power in the world, and provide for the

peace and stability for the rest of the world, which also helps our own prosperity, we have to make an investment in that force. That may mean that 3 cents on the dollar will not be sufficient in order to modernize this great force we have and keep leading technology in the hands of the greatest force in the world.

Senator WARNER. I thank the chairman. I thank you very much.

Chairman LEVIN. Thank you, Senator Warner. I want to return to the subject that I started relative to the ballistic missile defense.

Two of our colleagues here today from Kansas and Georgia expressed very appropriately their frustration in terms of consultation and, as far as I am concerned, your response was appropriate as their feelings.

General Kadish came before us and said that he has completed his review and that his recommendations had not yet been reviewed by you. Nonetheless, his completed review was briefed to us. In that completed review, he said that all the R&D programs which he had laid out for the year 2002 in no case bumped up against the ABM Treaty.

I asked you today, do you disagree with his brief in that regard. Your answer was, it seems to me that you had not been briefed on it yet by General Kadish, which is fair enough, if that is accurate. I do not have any problem with that. If that is the situation, that is the situation. But you do not have any basis, then, to disagree with his conclusion, which we, it seems to me, have a right to rely on at least in terms of the head of the BMDO saying that it is his conclusion and his review that none of the research and development in his plan for the year 2002 would violate the ABM Treaty. So do you have any basis to disagree with his conclusion?

I am not talking about what it evolves into in future years, if you use the word evolve. I am talking about 2002 budget dollars that you are asking us for.

You may want to keep the Russians guessing as to whether or not you pull out of the ABM Treaty, but we have a greater responsibility than that in terms of our dollars. We just have to know, are there any dollars in this budget request for research and development that violate the ABM Treaty, or any of these projected programs?

Secretary RUMSFELD. Mr. Chairman, General Kadish is a fine officer. He was requested to come up and brief, and he did.

Chairman LEVIN. By whom?

Senator WARNER. I think I was responsible.

Secretary RUMSFELD. I do not recall.

Chairman LEVIN. I think you offered him, by the way, and that is fine.

Secretary RUMSFELD. I am delighted he did, and he knows what he is talking about, and at the moment he came up here he had a budget figure in mind, and he briefed a presentation which he tells me now the budget has been reduced on. I could be wrong on this.

Chairman LEVIN. There were no budget figures that he briefed us on, Mr. Secretary.

Secretary RUMSFELD. I did not say he did brief you on budget figures. I said his program was based on a budget in his thinking that

he was planning his program on, and that budget, he tells me yesterday, has been adjusted.

Chairman LEVIN. Which way?

Secretary RUMSFELD. Down.

Chairman LEVIN. Which means there is even less money than he presumably thought he had for 2002.

Secretary RUMSFELD. Yes, that is correct.

Chairman LEVIN. There is even less money.

Secretary RUMSFELD. Even less money, exactly.

Now, the next thing I would say is, I would repeat, he is a very fine officer. He is not a lawyer, and he is not the compliance officer, so he is not the person, in my personal view, to be advising the committee as to whether or not he thinks something he is doing conceivably could end up violating the treaty.

Chairman LEVIN. End up in 2002? This is very important. You are asking us for budget dollars in 2002.

Secretary RUMSFELD. I understand.

Chairman LEVIN. We have to know, are any of those budget dollars going to violate the treaty? It is a fairly direct question. Are they, or not?

Secretary RUMSFELD. I have said, not to my knowledge. I am a conservative person. It is conceivable that there are lawyers—indeed, there was one in the room yesterday who has different views from others, so it is—first of all, a treaty depends on historic practice, it depends on interpretations, it depends upon debatable legal concepts, and for me to sit here and tell a committee of the United States Senate that I, Don Rumsfeld, a nonlawyer, am telling you that I understand every conceivable thing that an R&D program could conceivably do, and that I can assure you that no lawyers are going to tell you that it might be in violation of something, I am not going to do it.

Chairman LEVIN. You have not been asked to do it.

Secretary RUMSFELD. I will not do it.

Chairman LEVIN. You have not been asked to.

Secretary RUMSFELD. Good, because I cannot.

Chairman LEVIN. By the way, General Kadish did consult with lawyers. He is not a lawyer.

Secretary RUMSFELD. Of course he did.

Chairman LEVIN. He got legal advice.

Secretary RUMSFELD. Of course he did.

Chairman LEVIN. He gave us his conclusion, not based on legal advice, but on the advice of his compliance office and his lawyers.

Your words that you just gave us, however, not to your knowledge, are the clearest indication that in your judgment there is nothing in the 2002 R&D budget for ballistic missile defense, in your judgment, that violates the ABM Treaty. Do I read you correctly? Have you reached a judgment or not?

Secretary RUMSFELD. I have. Let me respond, and see if I can do it in a way that will add clarity to this.

The first thing I would say is that the administration has no plans to do anything to violate the Treaty. Now, I do not know how I could be any clearer on that.

Chairman LEVIN. That is fine.

Secretary RUMSFELD. What the President intends to do is to have General Kadish proceed with a research and development program. One or more of the activities may, eventually will, the Good Lord willing, run up against the treaty and be a violation.

Chairman LEVIN. But not in 2002.

Secretary RUMSFELD. Before that happens, we would be told, and we would have been in discussions with the Russians, and we fully intend that we would have fashioned some sort of a framework to move beyond the treaty.

Now, the reason I am being very careful in what I say is because I am a conservative person. If you went ahead in Alaska——

Chairman LEVIN. Is there money for that in Alaska, in this budget?

Secretary RUMSFELD. The budget has not been finalized because I have not been briefed on the R&D program under the new numbers of dollars.

Chairman LEVIN. It has been submitted to us.

Secretary RUMSFELD. I know, but you are talking about money for a program. There is money in the 2002 budget amendment for an R&D program for missile defense. The missile defense program itself, that General Kadish is working on, has not been finalized because we just got the number from the budget bureau, the Office of Management and Budget, and he just got a reduced number. He will then fashion that specific program and make a recommendation.

Chairman LEVIN. To you.

Secretary RUMSFELD. To me, exactly.

Chairman LEVIN. Then when will we get it from you?

Secretary RUMSFELD. When I get it.

Chairman LEVIN. How many days? I mean, we are trying to make up a budget here. This is an important issue.

Secretary RUMSFELD. I can tell you we have no intention of breaking the treaty, if that is the question.

Now, is it possible someone could say, "oh, if you went into Alaska and shipped the stuff there and cleared the site, and started to do any kind of an upgrade on that radar that is there," I, some lawyer, could say that that is not a test bed, it is a prototype, and therefore it would be in violation of the treaty. Could that happen? You bet.

Chairman LEVIN. That a lawyer would say that, but it is not your judgment?

Look, you have the responsibility as Secretary of Defense. We have a responsibility as people who authorize expenditures. We have to make a judgment the best we can. You have to make a judgment. There is a lot riding on this judgment, a lot riding on it, and we have to make an assessment, and you need to make an assessment, frankly. You need to make an assessment.

If it is not your intention that any 2002 money violate the treaty in any of your R&D programs, your statement to that effect is very meaningful. We will reach our own judgment.

Secretary RUMSFELD. All right, let me try it this way. The administration has no plans to violate the treaty or to break the law in 2002, 2003, 2010. What we intend to do is to have an R&D program, begin discussions with the Russians and establish a frame-

work to move beyond the treaty, because the treaty inhibits the deployment and testing of ballistic missile defense, and the President wants to have ballistic missile defense.

Chairman LEVIN. Senator Allard.

Secretary RUMSFELD. Therefore, we do not intend to break it at any time, break the treaty, break the law.

Chairman LEVIN. You are hoping to amend the treaty so you do not break it. My question is—

Secretary RUMSFELD. Well, wait—no.

Chairman LEVIN. We are going to keep asking.

Secretary RUMSFELD. I see your point. Let me—

Chairman LEVIN. We are going to keep asking the question, because we need an answer, the country needs an answer, the world needs an answer. Is there any money in the 2002 budget request which, for R&D programs, missile defense, would, in your judgment, violate the ABM Treaty? I am going to keep asking it. We need an answer, in your judgment.

Secretary RUMSFELD. Let me try it—let me finish the thought, and maybe this will answer it.

Violating the treaty means that the treaty still exists. As I understand the question, and what I have said is that the President fully intends to work with the Russians and fashion something that does not allow the constraints of the treaty to inhibit the development of missile defense, and if he is not able to, he has indicated he will give 6 months notice.

I mean, that—and then he would not be breaking the treaty, or violating the treaty. He would be using the treaty provision that allows a country to give 6 months notice and step away from the treaty, and the hope is not to do that. The hope, obviously, is to fashion an arrangement with the Russians that is something that is acceptable to move beyond it.

Chairman LEVIN. Thank you. Senator Allard.

Senator ALLARD. Mr. Chairman, thank you very much, and I apologize, I was not here earlier, but a busy schedule dictated my absence for the first round of questioning. I appreciate the fact that you are giving me a shot here.

I would like to move to the airborne laser, Mr. Secretary. According to my understanding, the supplemental includes about \$153 million for the airborne laser, and there is full funding in the fiscal year 2002 budget. How high a priority is the airborne laser program for you and for the Department in regards to the missile defense program?

Secretary RUMSFELD. I wish these answers were easy. I cannot characterize how high a priority it is. It is one of 8 or 10 or 12 programs that General Kadish and the Ballistic Missile Defense Office has briefed us on a preliminary basis that are part of the things he would like to move forward on. He is now adjusting that program to fit his new budget mark.

It is something that has been underway for sometime. It is something that, if I am not mistaken, is some way down the road. Whether or not it is going to be accelerated, it is, I think, something that is yet to be decided in the Department.

Senator ALLARD. I want to be supportive in your missile defense efforts, and move in this direction. Overall, the ballistic missile de-

fense budget will increase about \$1 billion compared to last year. Some missile defense critics will no doubt argue that the increase is too large, and meeting other shortfalls in the Department, they will claim, deserves priority over missile defense. Can you tell me on what basis did you accord missile defense the priority it received in your budget proposal?

Secretary RUMSFELD. I suppose it is safe to say that if one started out with one's first choice, most of the budgets and elements of the budget would be higher than they are. As in any organization and any budgeting process, you end up with making judgments and tradeoffs.

At the present time, that budget is at \$8.2 billion total, and that includes the theater missile defense as well as the national missile defense, including the airborne laser dollars. It is about 2.0 or 2.5 percent of the total budget. It compares, for example, with something like \$11 billion in the aggregated terrorism number. It is higher than it was. It does not fund all the things that General Kadish had hoped to be able to fund, and it funds some of them on a somewhat slower basis.

Senator ALLARD. Let me ask you this, do you think the threat in this area is growing greater than other areas of threat?

Secretary RUMSFELD. I think that the threat of a major land conflict in Europe is very low. I think the threat of a major strategic nuclear exchange with Russia is very low.

I think that the problem of proliferation and the advancement of technologies and the relaxed tension in the world has led to the availability of weapons of mass destruction and the ability to deliver them in a variety of ways. Because it is so difficult to cope with western armies, navies, and air forces, the nations that have an interest in dissuading us from doing things, and have an interest in imposing their will on their neighbors, have looked for these asymmetric threats from terrorism, cruise missiles, ballistic missiles, and I would guess down the road, cyber warfare as well, because we have vulnerabilities in those areas that are distinctive, compared to the vulnerabilities we have with respect to typical warfare.

I would rank all of those as risks. The proliferation of cruise missiles is taking place. I worry a great deal about germ warfare and what we read in the intelligence reports about what is taking place in the world. There is no question that the number of nations that are getting ballistic missiles is growing, and I certainly rank the ballistic missile threat up among those asymmetric threats very high.

Senator ALLARD. In regard to the ballistic missile defense program, maybe General Shelton or maybe somebody else on the panel would like to answer this question, but the budget structure has been substantially changed from last year from the one that focused on specific systems, such as national missile defense, Theater High-Altitude Area Defense (THAAD), and the Navy theater-wide, to one that focuses on phases of the ballistic missile during flight that our forces might intercept. Could you talk a little bit about the advantages of this restructuring?

Secretary RUMSFELD. Actually, what happened was that General Kadish and various others have decided that reorganizing how that

program should go forward led to the kinds of adjustments that you are talking about, and Dr. Zakheim can comment on it.

Dr. ZAKHEIM. Yes, sir. You are correct, Senator, that the general focus now is on the phases of flight: the initial phase, mid-course and terminal. There are several things that were done. Mature systems have been devolved to the services; the Army PAC-3 the Patriot upgrade; the Navy area-wide, which used to be known as Navy lower-tier; the international program we have with the Europeans, to which they attach high importance, the medium-range extended air defense system (MEADS).

On the other hand, systems that were not as mature, and I include among those the airborne laser, which the Secretary mentioned, space-based laser, and space-based infrared system, have devolved to the management of General Kadish at the Ballistic Missile Defense Office. If you aggregate what General Kadish is essentially now dealing with in his R&D program, it is slightly over \$7 billion.

You mention THAAD. There is some program visibility for that. Those are being carried as projects within the overarching structure that I outlined.

Senator ALLARD. Thank you. I see my time has expired.

Chairman LEVIN. Senator McCain. Thank you.

Senator MCCAIN. Thank you, Mr. Chairman. Mr. Secretary, it has been a long afternoon for you, and I will try not to impose on your time too much longer.

General Shelton, on September 27, 2000, you said that it is a real success story to go from \$43 billion procurement 3 years ago to \$60 billion in the 2001 budget, a significant achievement led by Secretary Cohen. Then you go on to say that the simple reality is that after 3 years of demanding and unanticipated military and humanitarian operations, we know that the \$60 billion projected by the QDR will not be sufficient to sustain the force.

I look at the procurement budget, fiscal year 2001, \$62.1 billion, fiscal year 2002, \$61.6 billion, an actual decrease in procurement. How do you state on September 27 that \$60 billion projected will not be sufficient to sustain the force and then come tell us that \$62.1 and \$61.6 are sufficient?

General SHELTON. Senator McCain, what I said was that in the 2002 budget the emphasis, of course, is sustained quality of life issues for the force. It has funded current readiness. In fact, it added \$18 billion between 2001 and 2002.

Senator MCCAIN. I am talking about \$60 billion projected for procurement.

General SHELTON. What I also said was, obviously the shortfall, if there is one in the 2002 budget, the place that it needs most work is in recapitalization and modernization, which maintains slightly over the \$60 billion that is necessary, but not anywhere near what will be necessary to recapitalize, modernize, and transform the force for the future.

That is going to have to be the answer—how much more is required over the \$60 billion should be the answer that comes out of the QDR. What our strategy is going to be, what the force structure to support that strategy is going to be, and consequently how much additional money is going to be required to support the moderniza-

tion and in the numbers of things and types of units that will be required to support the strategy. It obviously will be a lot more than \$60 billion.

Senator MCCAIN. I will not belabor the point.

Mr. Secretary, I was not here for your opening statement, but I read it, and I think it is a very powerful and important statement. I think it lays out our requirements and our needs as strongly as possible.

Part of your statement is that we could do better with a round of base closing and adjustments that reduced unneeded facilities by, for example, 25 percent. We could focus the funds on facilities, et cetera. Without base closings, achieving the 67-year replacement rate would require an additional \$7 billion annually.

I take that to mean you are proposing a BRAC.

Secretary RUMSFELD. We will be proposing something that people will call a BRAC. Whether it will fit the previous model or not, I do not know. We have people working on it right now, talking with people on the Hill. They will certainly be visiting with the leadership on this committee, with you, and those in the House.

It is not something that I, personally, am delighted to be doing. It causes a lot of heartburn, pain, concern, anger, apprehension, fear, but we simply have to manage the money in this Department better than we are doing. BRAC is only one piece of it. There are a host of other things that we are prevented from doing that we need to be freed up to do.

Senator MCCAIN. I agree with you that it is one of many things, but I would assume that \$7 billion a year is a fairly good chunk of some of the things we need to do.

Secretary RUMSFELD. I do not know this because I have never been around for a BRAC, but I am told that problem with it is that the money does not start coming in until the fourth or fifth year.

Senator MCCAIN. Every year you wait, that is another year delay from the time that it does come in.

Secretary RUMSFELD. Exactly.

Senator MCCAIN. My point is, I do not care whether you call it BRAC or not, but we have learned from bitter experience it has to be a deal where there is an up or down vote on the part of Congress.

Secretary RUMSFELD. Yes, sir.

Senator MCCAIN. That has to be an integral part. I would also argue that we have to make sure that it is not politicized. It is the view of this Member, I do not speak for other Members of the Senate, that the BRAC closing round concerning McClellan Air Force Base and Kelly Air Force Base was politicized. There cannot be a taint of politicization, so we are going to have to tighten up that language.

I just want to say, Mr. Secretary, I want to support you in that. I have been fighting for it a long time, and it is absolutely necessary. I have never been able to find any military expert who disagrees with the fact that we need a BRAC. I have not met a single one, and as we all know, they come in all sizes and shapes.

But the fact is, we also need to look at depot maintenance, because a lot of depot maintenance today could be contracted out by civilian and competitive sources. If you feel, as I read in the media,

that some B-1s need to be taken out of commission, or any other weapons system in order to modernize the force, and you come and make that argument here, I want to support you.

The history of this Congress in recent years has been protection of depots, bases, and weapons systems while, unfortunately, men and women in the military are living in conditions that in many cases are unacceptable, and under deployment and operational requirements that have made it extremely difficult for us to recruit and maintain quality young men and women. I want to help you in this effort in any possible way that I can.

I would like to add one additional comment, if I could. I do not believe that you are asking for enough money. I believe it is because, as you stated in print, there was so much money taken up in a tax cut that there is not money available. I am sure that you may have regretted the words, or maybe I misinterpreted them.

Secretary RUMSFELD. I did not say that.

Senator MCCAIN. Well, I will get you the quote. It is a pretty good quote. [Laughter.]

Secretary RUMSFELD. It does not sound like a good one to me. [Laughter.]

Senator MCCAIN. The fact is, there is not enough money for defense, medicare, and social security, and when you ask, as I have been told, for \$32 billion and get \$18 billion, or roughly, as the media reports, then I think it is very unfortunate. In fact, as long as I have been around here that has been the custom. It is driven by budgets rather than requirements, and when there is not money available, somehow that seems to be the case.

I thank you, Mr. Secretary.

Secretary RUMSFELD. May we just make one comment?

Senator MCCAIN. Would you respond? Yes, I would like to hear your response.

Secretary RUMSFELD. On the depot issue, Dov Zakheim would like to comment on that.

Dr. ZAKHEIM. Senator, we do have an initiative specifically on the depot issue. It is one that essentially says if a depot has back orders, which means by definition they cannot deal with it now, and that is by their own definition, because it is a back order, then we would propose to contract out that work. That results in a savings of nearly \$200 million, which we could then apply to other departmental activities, so that is a step in the direction that you are talking about, sir.

Senator MCCAIN. Did you want to respond?

Secretary RUMSFELD. I would like to say thank you for your offer of assistance, and we will certainly appreciate that, and it is going to take a lot of assistance.

Senator MCCAIN. Thank you, Mr. Secretary.

Senator WARNER. I want to say with regard to BRAC, that I was a coauthor with others on these bills. As a matter of fact, I joined you one year on the BRAC before this politicization issue came along.

Senator McCain is correct. I think the unanimous view among the professional military and others is that we have to reduce the infrastructure. I would hope that legislation will be brought up here in due course, and I want to support it.

I would suggest, however, that we not get the depot issue tagged onto that one. If it is to be addressed, let us address the issues separately. I have been around long enough to know how trains run at this station. [Laughter.]

You can catch one and get to where you want to go, but you can't load too many cars on it. With all due respect to my friend, if there is a depot question out there, maybe we ought to address it, but let us address it separately.

Mr. Secretary, there have been some hearings in the House on the subject of Vieques. I asked the chairman to withhold hearings of this committee on that important issue. The fact that we have not held hearings should in no means indicate that Senator Inhofe, myself, and a number of others, it is bipartisan here, are not gravely concerned about the need to fully train our men and women of the Armed Forces for combat activities with live ammunition, under every circumstance possible that parallels those they would face in a combat situation.

It is essential for many of our troops deploying to the gulf, because regrettably, in due course, they are often faced with hostile fire. Regrettably, they are constantly under a threat situation.

I hope that we can work our way through that. I have not had a chance to study your responses to the House today, but I will do so. I do not know whether you wish to have this opportunity to tell our committee what you feel procedurally we should do to work on that. I presume it is a steady concentration of looking at alternative means to train our troops. On the question of the referendum, I want to be supportive of our President, but at the moment I think it is uncertain just how that legislation would move or not move, should it be brought to Congress.

I have a suggestion, one that you do represent today, that you should press as hard as you can on finding alternative means to train our men and women of the Armed Forces, particularly those that are faced with deployments to the gulf region. Perhaps we can sit down quietly and work out in a bipartisan way some solutions to this problem. Is that a general summary of where you are on it?

Secretary RUMSFELD. Yes, sir. There is no question that we have to redouble the efforts to find alternative location, or locations, plural, so that the men and women who go to the gulf and deploy to the east have the kind of training they need. We are hard at that task, and we look forward to working with you on the subject.

Senator WARNER. You say redouble the efforts. I have spent a good deal of time working on this together with Senator Inhofe, who certainly has spent an enormous amount of time on this issue. A conscientious effort has been made. I am sure General Shelton is ready to testify to that point, and we had two, independent groups that went out and looked at it. Am I not correct on that, General?

General SHELTON. Sir, you are correct, and that work continues today, as a matter of fact.

Senator WARNER. More emphasis is needed, but I want to say that the Navy Department, in my judgment, has conscientiously, in the last year, looked at those options very carefully.

I would like to move to another subject, which is that I certainly commend our President. When he was a candidate and, indeed,

now that he is President, he has recognized we have a situation here at home, where perhaps only in the times of World War II did we consider homeland defense. Under the leadership of our former Chairman Roberts, and now our new Chairman Landrieu, the Emerging Threats and Capabilities Subcommittee, which looks at the future threats to this Nation, is bearing down again on homeland defense. I will be scrutinizing your budget submission to make sure that it is adequate, because we have to prepare for an attack of a terrorist nature in cities here in the United States, and prepare this Nation's response.

You came before the Chairman and Ranking Members of the Intelligence Committee, Armed Services Committee, Foreign Relations Committee, and the Appropriations Committee and gave us your thoughts on how you could marshal the resources of your Department to address this problem.

Clearly, the lines of authority, the lines of responsibility and how we would respond can be improved. I hope you will take a leadership role in doing that, so it is better understood who has what responsibility, should a crisis hit us.

Secretary RUMSFELD. Senator Warner, you know as well as any the problem is serious. It is not some distant thought, it is something that this country simply must address.

It is also enormously complex. The Department of Defense, in people's minds, has the task of defending our country, and under the law, as we all know, the responsibilities are elsewhere. The Department of Defense is not a first responder with respect to the kinds of attacks you are talking about, here at the homeland.

Senator WARNER. The Posse Comitatus Act, which goes way back in our history and is a well-thought-out concept, stands as a barrier, and I think it is going to remain. I doubt if we can modify it, but the Department has enormous resources to bring to bear on a crisis. If we had 5,000 casualties, we would have to turn to the supplies within the Department to help that community instantly.

Secretary RUMSFELD. You are exactly right. If something happened in the United States of America, notwithstanding the law, notwithstanding the way we are organized, the phone call would be right to the Pentagon. The Pentagon has the organization with the capabilities to deal with a major disruption from weapons of mass destruction in the United States of America. Yet our society is not organized so that the Pentagon has that responsibility. It does not, and as you said, the President has asked Vice President Cheney to address the issue and to help put some order and structure into it, which he is in the process of doing.

Senator WARNER. General Shelton.

General SHELTON. Senator Warner, I believe, about 2 years ago we gave a tasking to our Joint Forces Commander, General Kernan, and before that Admiral Gehman, in Norfolk to stand up Joint Task Force Civil Support. Its primary purpose was to make sure that within the Department, we knew where all of these resources that could assist whoever the lead Federal agency are. Whether it was the Federal Emergency Management Agency or some other organization, we would know that they were organized, had the right training, had the equipment, and would be able to move very rapidly in the event we had multiple locations that were

hit simultaneously, not to take the lead, but to support whoever was in the lead, realizing that they would look to us to provide this type of support, as they normally do.

Of course, in the counterterrorism business we have a world-class capabilities, but always in support of the Department of Justice, and again, with a waiver of posse comitatus by the President.

Senator WARNER. More needs to be done.

I will pick up on two other points, Mr. Secretary. First is the stockpile stewardship program. While it is not under direct control of your Department, the readiness of the stockpile itself to some extent, impacts on the men and women of the Armed Forces who have to deal with nuclear weapons every day.

I suggest to you that you begin to review that, because it concerns me, not only for the men and women of the Armed Forces and the civilians that have to deal with this arsenal, but also for the communities and the environs where they are housed. We have to make certain of the safety and reliability of these weapons. From a credibility standpoint if the reliability of our weapons is in question that bears directly on deterrence. If a potential enemy feels that our weapons have little value, then deterrence goes.

Secretary RUMSFELD. You are exactly right, there is no question that the safety and reliability of that stockpile is enormously important to the Department of Defense, as well as to the country. It is part of the Department of Energy, as you well know, and General Gordon has the responsibility specifically within the Department.

He has a program. I have been briefed on it. In my view, it is a sensible program, a rational program. The problem that exists, of course, is like others. At what pace are you able to fund that program so that in fact you have a confidence level that you are dealing properly with safety and reliability?

Senator WARNER. I think you should fund it at the pace that technology can accept it, and judiciously and efficiently spend those dollars. We are coming down on a curve where the stockpile, by the very nature of its age, is beginning to raise potential questions of safety and credibility, and we are going to have to make the decision as a Nation whether we go into production on certain new weapons.

Secretary RUMSFELD. Senator, that program has been underfunded for a series of years. It is just a brutal fact.

Senator WARNER. All right. I will address that later.

Lastly, could you bring us up to date on the policy that our President has established together with NATO as to the utilization of NATO forces with respect to Macedonia. I believe our President has indicated that our forces would be part of that effort as NATO makes its decision. Is that generally correct?

Secretary RUMSFELD. The circumstance is that the United States has, in the country of the former Yugoslavian Republic of Macedonia, somewhere between 400 and 700 U.S. military at any given time, depending on rotation. They have a variety of functions, but most of the functions relate to supporting the forces in Kosovo, which is, of course, just a short distance away.

They have been there for a number of years now. They do some UAV work, they do some logistics work, and they do some transpor-

tation work. There is a very small unit that was there to assist the Government of Macedonia for a period, and I think that group left.

General SHELTON. Yes, sir.

Secretary RUMSFELD. The situation in the country is very difficult. There have been decades of hostility between the Albanians and the rest of the population, as you know well. At the moment, the Albanian representatives are still part of the government. At the moment, most of the ethnic Albanians are still a part of the military, although some non-trivial number left within the last 7 days, departed the military, which was unfortunate.

There are physical threats from Albanian extremists who are using force and violence against the parliament a short distance away, against the airport in Skopje, where our troops and our UAVs are located. So they are at risk. There have been a lot of so-called envoys. Secretary-General Robertson has been in and out several times. Solana has been in and out several times. Now, the French have appointed some man named Leotard who is going to be going in there.

The government is young and it is facing a very difficult situation. They are not all in agreement, as anyone who reads the press can tell. There are some tensions between various members of the Macedonian Government. There is no way in the world to predict what the outcome will be, whether or not a deal will finally be arranged for a cease-fire.

I will say that there recently has been something very good that has happened in the area, and that was when the ground safety zone actually was turned back over to the Serbs, and a great many weapons were turned in voluntarily. It was done peacefully, there was no violence, and it was exceedingly well done. It is possible that some good things can happen there. It is also possible that it can deteriorate rather rapidly. We had some buses that were assisting in moving some Albanians within the last 48 hours that were surrounded, and it could have deteriorated into a very difficult situation, very rapidly.

Senator WARNER. I hope that you will consult with Congress should it require putting our troops in that assignment into greater risk.

Lastly, Mr. Secretary, this committee took several initiatives last year with regard to unmanned vehicles. I note that the Fiscal Year 2002 Budget Amendment has increased funding for several of these programs with the potential to transform the military. We commend you, and I hope it moves forward.

I note the presence of my distinguished colleague from Alabama, who has returned. We are about to wrap up here. Do you wish to ask any questions?

Senator SESSIONS. I have one brief series to ask. Mr. Secretary, we are in such a new era, it seems to me, in regards to Russia. I spent 2 weeks there as a private citizen in 1993, and the people are wonderful. They are our friends now. They are not our enemies, and we need to build on that. I applaud the President for doing so.

It strikes me quite plainly that the ABM Treaty, which has been in effect since 1972, is not appropriate for today's world. We have threats of missile attacks from other nations that endanger American lives. I hope that our negotiations and our efforts to work with

the Russians will succeed in getting them to agree to allow us to construct a national missile defense system.

First of all, it is important to our national security. I know you believe that. Your bipartisan commission unanimously found that we were facing a threat to our Nation from a ballistic missile attack. I hope we can proceed on that because the treaty itself provides the United States a way out of it, with notice. It is not something that binds us forever.

Certainly, the Russia that exists today is not the Soviet Union that we signed the treaty with. The problem is this: as I understand it, President Clinton instructed that the development of national missile defense be treaty-compliant. There are some ways to do that, but I have heard expert testimony, and I would ask if you or General Shelton would comment on it, that if we continue with that treaty-compliant approach it will delay the implementation of a good system. It will make the system more expensive, and at its conclusion, we will probably be less secure than if we proceeded outside the treaty.

Secretary RUMSFELD. Senator, it is certainly my view that the way to develop the most effective and most cost-efficient ballistic missile defense is not to try to design something that fits in a treaty that prohibits you from having a ballistic missile defense.

Senator SESSIONS. Well said. What is troubling me, Senator Warner, is that we have members of this Senate tying the hands of the President of the United States. They are saying basically to Russia, "do not agree to this thing." If you do not agree to the President's request, we may not deploy the system, and I think that is tying the President's hands. That is not a bipartisan foreign policy that we are a part of.

The President ran on this issue. It was something that he took his case to the American people on, and we voted on it, Mr. Secretary. We voted to deploy this. Maybe there is some disagreement about how fast we ought to deploy it, but there should not be disagreement in Congress, because we voted to deploy the system as soon as it was technologically feasible to do so.

So I remain troubled that members of this body make statements suggesting that if the Russians hold out and fail to work out an agreement with the President, we are prohibited from protecting ourselves from missile attacks from rogue nations. Maybe you would want to comment on that.

Secretary RUMSFELD. Senator, I thank you for your comment. As one of the individuals that has been asked to begin the process of meeting with the Russians to attempt to fashion some sort of a framework that would take us beyond the ABM Treaty, I have to admit that entering a negotiation where the Russian, the other side that you are dealing with, may have come to a conclusion that they have a veto over whether or not the United States of America should have a missile defense capability would be a terrible way to enter a negotiation.

So anything that would contribute to the impression on the part of the Russians that the United States would like to have a ballistic missile defense capability, but we would not want it if they did not want us to have it, would clearly mean that you would not be

in a negotiation. The odds are you would simply be stonewalled, and that is not how one wants to spend one's time.

The NATO countries have properly told the Russians that they will not have a veto with respect to NATO enlargement, for example. There is no reason that Russia should have a veto over enlargement, and the President told Mr. Putin that. I mentioned that to Mr. Ivanov, the defense minister of Russia, and NATO itself has spoken on that subject. If they are not having a veto on NATO enlargement, I cannot imagine why anyone would want to hand them a veto with respect to a missile defense system that would protect the population of the United States of America, our deployed forces, and our friends and allies.

Senator SESSIONS. Thank you, and thank you for having the courage to discuss this issue. I think as the American people become more aware of it they will be supportive, and you will find Congress supportive. I am sure they will be. We voted on it previously.

General Shelton, let me express my appreciation for your service. You have testified so many times here, and it is an honor to have known you and worked with you. You have been truly committed to your Nation's strength and welfare, and we appreciate it very much.

General SHELTON. Thank you very much, Senator Sessions.

Secretary RUMSFELD. Mr. Chairman, may I make a comment? I am a little concerned about all this praise for General Shelton. I expect to get 3½ more months work out of him. [Laughter.]

I hope and pray that that is the case, and I would not want him to start mentally leaving, because we need this fine officer. He is doing a superb job for us.

Senator WARNER. We know him, and know him well. That will not occur.

We have had an excellent hearing, Mr. Secretary, General Shelton, and Dr. Zakheim. Thank you, Senator, for your observations. I think we had a good, constructive dialogue on missile defense here today. I hope no comments by any of our colleagues would be construed to suggest that it would undermine the President's ability to continue to consult with our allies and eventually to sit down and work out a new framework with Russia. I think we are all supportive of the President in his endeavors to do that. Certainly, I am.

I thank you, Mr. Secretary.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR CARL LEVIN

START II

1. Senator LEVIN. Secretary Rumsfeld, section 1302 of the National Defense Authorization Act for Fiscal Year 1998 requires the U.S. to remain at START I strategic force structure levels until such time as START II enters into force. Will you be asking Congress to repeal this provision of the law?

Secretary RUMSFELD. Yes, I will. The DOD supports repeal of Section 1302 in its entirety in order to maintain the President's prerogative in setting strategic force structure for the defense of the United States. As currently written, Section 1302 prohibits the obligation of funds for the retirement or dismantlement, or the preparations for retirement or dismantlement, of strategic nuclear delivery systems until entry into force of the START II Treaty. Unnecessarily linking reductions in U.S. strategic nuclear delivery systems to START II entry into force severely limits the

President's flexibility and could delay implementation of important parts of the President's overall deterrent strategy. The repeal of this legislation would therefore allow the President to make the necessary changes and modifications to strategic nuclear force structure in support of his comprehensive review of US deterrence requirements.

TRIDENT SUBMARINE

2. Senator LEVIN. Secretary Rumsfeld, I understand the amended budget requests funding to maintain the option to convert two of the four Trident submarines excess to strategic requirements, to a conventional non-nuclear role. Have you made a decision as to whether any such conversion would or would not allow the submarine to be excluded from START II accounting rules?

Secretary RUMSFELD. Our intention is for the Nuclear-Powered Cruise Missile Attack Submarine (SSGN) to retain its D5 launch tube and remain accountable under current START Treaty rules. To convert SSGN by removing the D5 tubes completely and replacing it with a whole new hull section would be prohibitive from a cost perspective and would approximately double the conversion costs. Although accountable under START I, the only applicable strategic nuclear arms treaty currently in force, the "phantom warheads" associated with SSGN would not cause the United States to exceed limits. SSGN would have to be addressed as an exemption in any future arms control agreement.

VIEQUES

3a. Senator LEVIN. Secretary Rumsfeld, you have been quoted as saying you are in "full agreement" with Secretary England's recent proposal to leave Vieques by 2003 and cancel the scheduled referendum mandated by last year's defense authorization bill.

Did you participate in and approve this decision? In other words, did you tell Secretary England he needed your approval before proposing this to White House officials, and did he have your approval before he did so?

When is the administration going to submit your legislative proposal regarding the referendum?

Was your agreement with Secretary England's proposal to cancel the referendum and make a commitment now to leave Vieques based on an understanding that a suitable alternative exists? If so, can you tell us where that new training area is located?

Secretary RUMSFELD. The effective training for our sailors and marines is a matter most appropriately handled by the Department of the Navy. The Secretary of the Navy has the best vantage point to make these decisions and he made it. We did discuss the Vieques range issue before he briefed the White House and Congress. I did not tell the Secretary of the Navy how to make the decision or specify the mechanics of briefing it outside of the DOD.

The National Defense Authorization Act for Fiscal Year 2001, requiring a referendum by the citizens of the island of Vieques to decide whether the Navy can continue to train there, has put Navy in the challenging situation of having training matters effecting fleet readiness being decided by local vote. Rather than initiating a precedent where our training range needs are submitted to a plebiscite, we decided to pursue aggressively both legislative relief from the referendum and suitable training alternatives now. We expect to submit the proposal for legislative relief from the November referendum soon.

There are currently no singular satisfactory alternatives to Vieques. Between now and May 2003, we will work to develop the best possible combination of methods and places to replace Vieques. The Secretary of the Navy has already directed a study of alternative with initial ideas due to him this fall.

3b. Senator LEVIN. General Shelton, did you support the decision to leave Vieques without trying to win the referendum that had been agreed to?

General SHELTON. The training and equipping of our forces is a Title 10 responsibility of each of the Services. In this particular case, the Secretary of the Navy decided to seek legislative relief from the referendum, but in the interim to do all the Navy can do to win should the referendum occur. I support his position.

3c. Senator LEVIN. General Shelton, the Navy has consistently stated that they cannot find a suitable replacement for Vieques. Do you disagree with their assessment, or has their assessment changed your knowledge?

General SHELTON. My primary concern is to provide trained and ready forces to the warfighting commanders in chief, and where that required training is performed is not an overriding issue. Navy leadership has said that they will provide comparable, not necessarily identical, training opportunities for the East Coast Battle Groups, and are currently pursuing alternative training methods and locations to ensure future battle groups continue to be combat ready for deployment.

3d. Senator LEVIN. Last week you said three alternative sites were being considered. Can you tell what the three locations you referred to are?

General SHELTON. I was referring to the Navy examining training opportunities in the Gulf region, in Texas and North Carolina, among others.

NATIONAL GUARD

4. Senator LEVIN. Army and Air National Guard requirements are traditionally underfunded in the Department of Defense budget. What strategy have you employed to ensure that the resourcing of the National Guard is commensurate with its missions?

What do you envision as the future missions of the National Guard?

Secretary RUMSFELD. The resourcing of Army and Air National Guard units, fleet modernization, and new missions are the responsibility of the service secretaries. DOD's oversight of the process assures unit resourcing commensurate with missioning within overall DOD fiscal constraints. Active, Guard, and Reserve units are addressed in our Total Force planning for the present and into the future. Please be assured that the Army and Air National Guard and all Reserve Components will continue to be full partners with their active counterparts, and their missions (current and future) will reflect that relationship.

READINESS

5. Senator LEVIN. General Shelton, in the fall of 1998 you told this committee that "we have 'nosed over' and our readiness is descending." When you appeared before this committee last September you stated that "we have made considerable progress these past 2 years in several key areas" such as "arresting the decline in near-term readiness." What is your assessment of the morale of our forces, including the retention situation in fiscal year 2001, and of the readiness of our forces to carry out their missions?

General SHELTON. Even though there are still some trouble spots, overall we are doing well. With the significant support of Congress, this year provided increased authority for retention bonuses, increases in pay and compensation, and enhancements in quality-of-life areas to include housing and health care. These continued improvements directly help our retention effort, morale of our troops, and more importantly, demonstrates to our Service members that we care about them, their families, and their quality of life.

I am pleased to report that retention is up across the board; however, we are not out of the woods yet. It appears the Air Force will miss its aggregate retention goals. Although their overall retention picture looks better, particularly in first-term retention, the loss of second-term and career Service members has had an affect on the readiness of the Service. Additionally, we continue to see many of our senior enlisted and junior officers leaving each of the Services. While the Services' overall retention is good, shortages still exist in individual skills such as information technology; air traffic controllers, pilots, and other high tech skills—the same skills that are in high demand in the private sector. The common reasons members leave the military are lack of adequate compensation and high OPTEMPO.

In terms of readiness I'm proud to report that our soldiers, sailors, airmen, and marines remain ready to accomplish their assigned wartime mission(s). However, several commanders in chief (CINCs) and the Services continue to highlight in the Joint Monthly Readiness Review the impact that lower than desired retention rates have on their readiness . . . i.e. shortages of experienced personnel. Continued congressional support is critical to resolving these readiness concerns. Our long-term goal is to enhance the quality of life of those who have chosen to defend their country, ultimately ensuring our force remains both highly motivated and highly trained.

As in the past, continued congressional support will allow us to achieve higher levels of morale and readiness necessary to maintain the premier military force in the world.

QUESTIONS SUBMITTED BY SENATOR JEAN CARNAHAN

AIRLIFT CAPABILITIES

6a. Senator CARNAHAN. Secretary Rumsfeld, in April, General Robertson, head of U.S. Transportation Command, testified before our Subcommittee on Seapower. He stated that current U.S. operations required a massive increase in airlift capabilities. Then just this Tuesday, General Robertson announced that the military needs at least 60 more C-17 transports to meet its current requirements. The President's proposed budget seems to be addressing this need, with a requirement of 15 aircraft.

Secretary Rumsfeld, can you discuss how such an initiative might address a possible strategic shift to Asia and help in the rapid movement of new Army brigades?

Secretary RUMSFELD. The Army strongly supports the proposed 60 additional C-17 aircraft recommended by General Robertson, regardless of a possible strategy shift to Asia. This figure is consistent with the 54.5 million ton miles per day (MTM/D) as recommended by the Mobility Requirements Study 2005 (MRS-05). Strategic airlift is vital to the Army's strategic responsiveness goals of a brigade anywhere in the world in 96 hours, a division in 120 hours, and 5 divisions in 30 days. The C-17 in particular is crucial to achieving strategic surprise anywhere in the world with decisive ground combat power to influence the battle early on as opposed to reacting to an opponent's strategic initiative. The Army's Interim and Objective forces will be lighter and smaller than current legacy heavy divisions and therefore more rapidly deployable. The vehicles supporting these new organizations are being designed to fit inside a C-130 for tactical movement within any theater of operations. From a strategic perspective, the C-17 can maximize delivery times by delivering much larger cargo loads directly into a theater. The C-17 has the same small and austere airfield (SAAF) landing capability as the C-130, but with a significantly greater cargo capacity. One more advantage of the C-17 is its unique ability to leverage maximum on ground (MOG). MOG is a constraint at any aerial port of debarkation (APOD) and is determined by the sufficiency of the airfield's infrastructure to land, taxi, park, offload, refuel and maintain aircraft simultaneously. The C-17 optimizes MOG with its ability to back-up, self-load and provide more throughput delivered with less time on the ground.

The operational readiness rate of the C-17 combined with its performance parameters to date, make it the airframe of choice to rapidly deploy America's Army anywhere in the world expeditiously. Many do not realize that strategic airlift today is a scarce resource, which is heavily competed for early in any deployment sequence. For example, the United States Air Force (USAF) requires nearly 75 percent of the entire airlift fleet to move its bare-base sets and Aerospace Expeditionary Forces during the first several weeks of deployment. The Army requirement to deploy an IBCT in 96 hours will take on the order of 250 C-17 equivalent missions. Additionally, the USMC has a requirement similar to the Army's to deploy and activate one Maritime Prepositioning Ship (MPS) Squadron. The C-17 is also a high demand item for CINCs in the execution of their peacetime theater engagement plans. The utility of the C-17 to carry outsize and oversize military equipment over strategic distances and then land on SAAF in theater make it an invaluable asset to all CINCs and Services. During the period fiscal year 1996-2002, surge sealift will realize a 135 percent increase while Army prepositioned stocks afloat will increase 126 percent. Unfortunately, strategic airlift will not have increased at all from fiscal year 1996 out to fiscal year 2006 even after the 134 authorized C-17s are in service. The 120th C-17 will be delivered in 2004 and the 134th in 2005. With an average annual production rate of 15 C-17s, and even with decisive action today, the additional 60 would not be fully realized until 2009. During the interim, as we continue to retire the C-141 fleet and experience continued poor mission reliability of the C-5 fleet, our strategic airlift capacity will only get worse before it gets better. The 60 additional C-17s recommended by General Robertson—over and above the 134 originally authorized—will go far in balancing our strategic airlift capability with the actual requirement as identified in MRS-05. Until then, however, the actual airlift throughput capacity will diminish or at best remain static.

6b. Senator CARNAHAN. General Shelton, can you elaborate on these comments?

General SHELTON. Yes. Part of your question applies to a possible shift of our strategic focus. The United States has had strategic interests in Asia before and after World War II. We have political, economic, and military allies and friends with whom we have cooperated for many years. The current or future security environment will dictate whether we need to have a region of primary focus, but it will not suggest that we abandon our commitments to our other allies. As mentioned pre-

viously, the new defense strategy is not finalized, so it would be premature for me to be any more specific about our strategic focus at this time.

The MRS-05 study shows with great fidelity that to meet our Nation's contingencies, we must increase our airlift capability to the Joint Chiefs 'agreed-upon' 54.5 MTM/day as a minimum. Please remember that 54.5 MTM/D still puts us at moderate risk, any less capability and we enter the high-risk category. The best way for us to accomplish this is to purchase additional C-17s and modernize the C-5. The C-17 has continued to meet and exceed our expectations as our military's new core airlifter. Programmatically, the time is now to execute a follow-on multi-year contract; otherwise Boeing and its sub-contractors will begin shutting down the production line. If we delay much longer, the cost of additional C-17s is going to become prohibitively expensive. A shift in strategies toward Asia does not invalidate MRS-05 conclusions, nor does Service transformation efforts. A more Asia-centric defense strategy naturally carries with it greater deployment distances from the continental United States (CONUS), keeping the airlift requirement high. Service transformation may mean lighter, leaner, and more lethal but it also means faster. With the lighter forces requiring a faster deployment, airlift rate of delivery increases and offsets the reduction in total tonnage delivered.

The 15 C-17s in the President's proposed budget do not address the need for 60 additional C-17s. Those aircraft are being purchased as part of the original 120 aircraft multi-year contract. In recent budgets, 14 additional C-17s were authorized to support the Special Operations mission. In the President's proposed budget we have added 3 more C-17s to continue addressing the airlift shortfall (if approved, the total C-17 buy will then be 137). Again, a firm commitment to acquire a total of 180 C-17s is critical. That would allow us to purchase the additional aircraft already on the books and 40+ more as a 60 aircraft multi-year, significantly reducing cost.

BASE STRUCTURE

7. Senator CARNAHAN. Secretary Rumsfeld, we have received limited information about a new program that the Pentagon is proposing, called the Efficient Facilities Initiative (EFI). As I understand it, this program has the same objectives as Base Realignment and Closure (BRAC). General Shelton's statement seemed to endorse another BRAC round, indicating that the Defense Department is operating at 23 percent excess base capacity in the United States.

Could you explain the difference between the program being considered by the administration and the BRAC rounds conducted in the past?

Mr. Secretary, there is great interest in this subject on our bases and in our communities. We were advised by the Comptroller about the EFI during our discussions about the 2002 budget. When do you plan to advise this committee as to whether the administration proposes to reduce the base structure in the coming year?

Secretary RUMSFELD. The Efficient Facilities Initiative that we are developing supports the Department's efforts to transform its facilities to meet the challenges of the new century. Three main components of this initiative are: authorization of an additional round of base closures and realignments in 2003; authorization of significant improvements in the existing base closure process; and authorization of a set of tools for the efficient operation of enduring military installations.

While using essentially the same process as has been used successfully before, the proposal would better ensure the primacy of military value in the selection and execution of base closure and realignment decisions. It would add authority to better harness the strength and creativity of the private sector to facilitate environmental restoration. This process would also continue the Department's no-cost economic development conveyance authority to reinvest in the economic redevelopment of the installation and the surrounding community.

Additionally, this initiative would add a new section to Title 10, United States Code, providing specific authorities that permit the military departments to explore ways of supporting its missions and people at more effectively, more efficiently and at less cost while maintaining its operational readiness. It is a collection of innovative authorities for the secretaries of the military departments to partner with local communities for the ownership, operation, and maintenance of an installation. This concept has been tested at Brooks Air Force Base in San Antonio, TX, under a pilot program with promising success. Our proposal would permanently authorize this program and make it available to all the military departments.

Our goal is to submit this EFI to Congress before the August recess.

WEAPONS OF MASS DESTRUCTION

8. Senator CARNAHAN. General Shelton, in your last appearance before this committee, you and the Secretary emphasized emerging threats posed by chemical, biological, and nuclear weapons around the globe. I believe, as you do, that these threats remain imminent. Even as we plan a long term strategy for dealing with Weapons of Mass Destruction (WMD), it is essential that our troops remain sufficiently protected from chemical/biological agents. I hope that the fiscal year 2002 defense budget will sufficiently equip our troops with adequate protection to deploy in a contaminated environment. Has the Pentagon sought to modernize its defenses against chemical and biological agents in the short term? We have heard a lot about new approaches to examining the ballistic missile threat to the United States and its allies. I share the Secretary's concerns over this threat, and support research, development, and testing for adequate defenses. I also understand that you have testified before this committee to illustrate the fact that chemical and biological agents pose a far more imminent threat than most other types of WMD attacks. Do you anticipate substantial increases in long term investments in chemical/biological defenses equivalent to other investments in WMD defense?

General SHELTON. Our troops are equipped with the most modern defense equipment capable of providing more than adequate protection against traditional chemical and biological warfare agent attacks. The President's Budget will provide improved chemical point and standoff detection capabilities, and continue research to improve protective ensembles and masks, medical chemical and biological countermeasures, and decontamination technologies. Always cognizant of emerging chemical and biological warfare threats, we continue to modernize and upgrade our equipment to maintain the highest standards of protection and to meet the challenge of future military operations. The DOD Chemical and Biological Defense Program is committed to maintaining the proper balance between the fielding of state-of-the-art equipment and continued investments in science and technology programs. The ongoing QDR is assessing our future requirements for countering nuclear, biological, and chemical weapons and means of delivery to include passive defense capabilities, both for military operations overseas and in support of civil authorities.

RESERVE COMPONENT

9a. Senator CARNAHAN. General Shelton, can you describe the expansion of our Reserve components' role in the "total force" since the Gulf War ended in 1991.

Are there any DOD plans to address health care and other benefits for reservists in recognition of their increasing contributions to the defense of our Nation?

General SHELTON. The Department of Defense has actively pursued equitable health care benefits for Reserve component members commensurate with their increased contribution to Total Force missions and their potential for risk and exposure to harm. With the support of Congress, health care protections have been expanded to ensure we are able to provide medical and dental care for a member who is injured or becomes ill while performing military duty. The law was also amended to ensure the family of Reserve member has access to the military health care system when the member is retained on active duty for treatment of or recovery from a service connected injury or illness. The recently expanded TRICARE Dental Program offers reservists a comprehensive, affordable and portable dental program that provides a uniform benefit supported by a robust and stable dental provider network. It also offers a family member option, not previously available to reservists.

DOD also plans to initiate a contract study to specifically assess the current health coverage experienced by reserve families. When the reservist is ordered to active duty for greater than 30 days, cost-effective options may be considered to lessen the burden on reservists and their families and the implications for Force Health Protection and the medical readiness of Reserve personnel.

HEALTH CARE

9b. Senator CARNAHAN. General Shelton, are there any DOD plans to address health care and other benefits for reservists in recognition of their increasing contributions to the defense of our Nation?

General SHELTON. The Department has actively pursued equitable health care benefits for Reserve component members commensurate with their increased contribution to Total Force missions and their potential for risk and exposure to harm. With the support of Congress, health care protections have been expanded to ensure we are able to provide medical and dental care for a member who is injured or be-

comes ill while performing military duty. The law was also amended to ensure the family of a Guard and Reserve member has access to the military health care system when the member is retained on active duty for treatment of or recovery from a service-connected injury or illness.

The recently expanded TRICARE Dental Program offers reservists a comprehensive, affordable and portable dental program that provides a uniform benefit supported by a robust and stable dental provider network. It also offers a family member option, not previously available to reservists.

The Department also plans to initiate a contract study to specifically assess the current health coverage provided to Reserve component members and their families, to identify new options that might be more cost effective, and to evaluate the likely response of Reserve component members to these new approaches. The project will consider such factors as healthcare for families of reservists when the reservist is not on Active Duty; the disruption and expense of healthcare coverage experienced by reserve families when the reservist is ordered to active duty for greater than 30 days; cost-effective options that may be considered to lessen the burden on reservists and their families; and the implications for Force Health Protection and the medical readiness of Reserve personnel.

QUESTIONS SUBMITTED BY SENATOR STROM THURMOND

FAMILY HOUSING

10. Senator THURMOND. Secretary Rumsfeld, the fiscal year 2002 budget amendment provides an additional \$400 million for family housing construction, of which I understand 80 percent must be dedicated toward the housing privatization initiative.

If you can sustain this level of funding for family housing, will you achieve the Department's 2010 goal for fixing the housing problem?

Secretary RUMSFELD. Currently, each service is pursuing varied levels of housing privatization. The Department is working with the services to increase the rate of privatization, where it makes economic sense, to better leverage the resources we ask for in annual budget submissions. Were the Department to receive funding above the current program levels in its outyear program, the Department, overall, would not only meet the 2010 goal, but would be able to eliminate all our inadequate housing prior to 2010. The extent to which the military services are able to privatize family housing is another key factor in achieving the 2010 goal.

RESERVE COMPONENT

11. Senator THURMOND. Secretary Rumsfeld, historically, funding for the Reserve component military construction program has been at a level of \$50 million for the Army and Air National Guard and much less for the other Reserve components. As a result, their aging facilities are in worse shape than the Active components.

Does your budget contemplate bringing the Reserve components up to the 67-year replacement standard?

Secretary RUMSFELD. The fiscal year 2002 Reserve component military construction (MILCON) President's budget of \$615 million is the highest in over 20 years and represents approximately 6 percent of the total Fiscal Year 2002 MILCON request of \$9.9 billion. The fiscal year 2002 budget additions represent an emergency "down payment" to begin restoring the readiness of facilities rated C-3 and C-4. The allocations for the active and Reserve components were, therefore, based on readiness ratings rather than on the 67-year recapitalization goal. The Reserve components received 20 percent of the additional fiscal year 2002 resources. The goal of future budgets is a Department-wide 67-year recapitalization cycle for all components, Active, Guard, and Reserve, as well as Defense Agencies.

MANAGEMENT REFORMS

12. Senator THURMOND. Secretary Rumsfeld, according to the briefing information I have received thus far, you plan to save \$1 billion by implementing a series of management reforms and initiatives. Additionally, in a recent interview, you described your vision of saving as much as \$10 to \$15 billion per year through additional acquisition and management reforms. Could you briefly discuss your vision of these future reforms in detail?

Secretary RUMSFELD. On June 18, 2001, I announced the formation of two new internal management committees that will take action to improve the Department's

overall business practices and transform the military into a 21st century fighting force: a Senior Executive Committee (SEC) and a Business Initiative Council (BIC). The mission of the BIC is to improve the efficiency of the Department of Defense business operations by identifying and implementing business reform actions that allow savings to be reallocated to higher priority efforts (i.e., people, readiness, modernization, and transformation). Such savings will be retained by the services/agencies for their reallocation.

Past studies have already pointed the way to many beneficial reforms. We plan to begin by drawing upon the recommendations of those studies, and then moving quickly toward their implementation, as well as re-enforcing promising reforms that are underway.

The functional leadership and expertise from both the business and operational communities of the Department, Joint Staff, and the Services will be called upon to examine and recommend where we should devote our energies. The Joint Staff and the Secretaries of the Military Departments have joined me and pledged their commitment to provide the steadfast leadership to improve the DOD's business practices.

MX MISSILES

13. Senator THURMOND. Secretary Rumsfeld, I understand your decision to retire the 50 MX missiles as an economic issue. However, I am concerned that it will affect on our ability to negotiate further cuts in Russia's nuclear arsenal.

What were the considerations regarding our overall nuclear arms reduction negotiations when you decided to retire the MX missiles?

Secretary RUMSFELD. In our on-going effort to properly size and configure our strategic nuclear forces to deal with the deterrent tasks of a post-Cold War world, we have determined after careful study that now is the time to retire our 50-missile MX force. This decision is consistent with our move toward a new post-Cold War framework and our effort to reduce the number of American nuclear weapons to the lowest possible number consistent with our national security and our commitments to our allies. In our view, such changes to our nuclear force posture should not require years and years of detailed negotiations under an out-moded, Cold War-style arms control process. There is an inherent contradiction in attempting to improve U.S.-Russian political relations and enhance strategic stability by remaining committed to the Cold War approach to arms control, a fundamentally adversarial approach. In 1991, the United States invited the Soviet Union to join it in removing thousands of tactical nuclear weapons from deployment. Huge reductions were achieved in a matter of months, making the world much safer, more quickly. Similarly, in the area of strategic nuclear weapons, we should invite the Russian government to accept the new vision put forward by the President, and act on it. In retiring the Peacekeeper missile force, we have an opportunity, to lead by example, to a safer world. It is in our best interest and the best interest of the world to take this step.

INFRASTRUCTURE

14. Senator THURMOND. Secretary Rumsfeld, one of the stated fiscal year 2002 goals is to streamline and upgrade DOD infrastructure. Although the budget reflects the funding to upgrade the infrastructure, there is no visibility on how you plan to streamline the infrastructure.

Please provide some specifics on how you plan to streamline the infrastructure.

Secretary RUMSFELD. The Department intends to streamline its infrastructure by seeking authority to conduct one additional round of base closure and realignment beginning in fiscal year 2003. The Department plans on submitting its request as a legislative proposal for fiscal year 2002 under the title of Efficient Facilities Initiative (EFI). If legislative authority for EFI is provided in fiscal year 2002, the Department will request funding in the fiscal year 2004 budget submission to begin implementation of approved base closures and realignments.

EFI is essential to re-shape and properly match installations' capabilities with changing military operational needs and to improve installation support for readiness. Strategies for privatization, competitive sourcing, and housing will be better formulated once decisions are made to eliminate unnecessary infrastructure. The Department cannot afford to maintain excess infrastructure while modernizing its weapons and increasing benefits. While savings will be significant and reinvested for other priority needs, an equally important message, is that EFI is an integral part of the military transformation occurring in all the Services.

GOVERNMENT JOBS

15. Senator THURMOND. Secretary Rumsfeld, I understand that the Office of Management and Budget ordered agencies to offer for competition at least 5 percent of government jobs considered commercial in nature. The directive also established a deadline of October 2002 to complete this task.

What are the implications of this directive on the Department of Defense and how do you plan to accomplish this task?

Secretary RUMSFELD. Through the past several years the Defense Department has managed the most robust program of competitions of government-performed commercial type activities among all the Federal Agencies. The competitions, performed under the procedures identified in Office of Management and Budget Circular A-76, take on average 2 years to complete. Therefore, most of those that will be completed by October 2002 were already initiated by October 2000 and constitute part of our ongoing program. While our current projections indicate that those that will complete during fiscal year 2002 alone will fall modestly shy of 5 percent, the cumulative competitions between fiscal year 1999 and fiscal year 2002 will be far in excess of the 5 percent target.

STRATEGIC LIFT

16. Senator THURMOND. General Shelton, in your prepared statement you indicate: "Congressional support of strategic lift is needed if we are to build a national mobility capability sufficient for our current and future needs." What are the specific programs for which you are seeking support?

General SHELTON. Our Strategic Mobility Triad is the central component of our strategy to respond around the world. The triad consists of strategic airlift, strategic sealift, and pre-positioning. I will address each portion of the triad that could benefit from your support, as well as associated infrastructure issues.

Strategic Airlift

- Acquisition and sustainment for the full fleet of C-17s: fund the full complement of C-17s required to attain strategic airlift requirement identified by MRS-05/QDR and correct sustainment shortfalls for the currently authorized C-17 fleet.
- C-5 Modernization: fund Avionics Modernization Program (AMP) and Reliability Enhancement and Re-engining Program (RERP). AMP and RERP are needed to improve the C-5 mission capable rate, to allow us to improve the oversize and outsize requirements. AMP increases navigational safety and complies with new internationally mandated Global Air Traffic Management standards—ensuring continued access to worldwide air routes. RERP will significantly improve mission capable rates through a one-time upgrade of aircraft structure, engines, fuel system, environmental system, flight controls, hydraulic system, electrical system, pneumatic system, and landing gear.
- Large Aircraft Defensive Systems (LADS): fund Air Mobility Command's (AMC) Large Aircraft Infrared Countermeasures (LAIRCM) system. The system is designed to protect critical strategic aircraft from lethal Man Portable Air Defensive Systems (MANPADS) in Third World and terrorist areas. LADS provides next generation defensive capabilities to reduce vulnerability as these aircraft face increasingly sophisticated portable anti-aircraft systems. The current AMC program calls for the outfitting of a 79-aircraft Small-Scale Contingency (SSC) complement, consisting of C-17s, C-5s, C-130s and KC-135s.
- Air Refueling: address aircrew and maintenance shortfalls in the KC-135 fleet. An AMC initiative to fill the additional 75 aircrew and 601 maintenance positions is not funded. Without full funding to correct these shortfalls, our ability to operate in a timely and flexible manner across the full spectrum of contingencies will be severely limited.
- Materials Handling Equipment (MHE): The modernization of our MHE fleet consists of Tunner (60,000) loaders and Next Generation Small Loader (NGSL) (25,000) loaders. Both loaders are able to service all cargo aircraft, especially the Civil Reserve Air Fleet (CRAF) aircraft with their 18.5-foot upper cargo decks. The Tunner lacks the funding for the purchase and sustainment of the final 38 units. The NGSL is fully funded, but has a shortfall in sustainment funding.

Strategic Sealift

Regarding strategic sealift the following is provided: The continued decline of U.S. flag merchant marine fleet and the increased globalization/consolidation of companies within the maritime industry may affect USTRANSCOM's ability to meet peace and wartime DOD requirements. Our objective is a stable commercial merchant marine capability, with maximum emphasis on U.S. flag ships, U.S. citizen mariners to support DOD contingency pre-positioning, surge and sustainment requirements.

- Continued support to finish the Large Medium Speed Roll-on/Roll-off (LMSR) build. This on-going construction program consists of 19 vessels that will provide the backbone of our contingency support fleet with over 5.2M square feet of militarily useful capacity.
- Re-capitalization of the Ready Reserve Force (RRF) ships. The aging of these critical surge fleet assets causes increasing difficulty with operation and maintenance and requires re-capitalization.
- Maritime Security Program (MSP)/Jones Act/Cargo Preference. These programs are critical to ensure available U.S. flag ships and mariners are available to support national defense. Additionally, the programs help maintain viability of the U.S. merchant marine fleet in a highly competitive global environment.
- Merchant Mariner manning. U.S. merchant mariners are an integral part of national security to crew the organic and commercial fleets.
- Additional sealift issues which are not specifically defined yet, but will likely require full Congressional support are:
 - Maritime tanker re-capitalization. Maritime tanker situation is adequate at present; however, Oil Pollution Act of 1990 (OPA 90) (double hull tanker requirement) requires extensive recapitalization. All tankers must be in compliance with OPA 90 by 2015.
 - Heavy lift for non-self deployable watercraft (NSDW). Military Requirement Study 2005 identified a shortfall in our ability to deliver NSDW to overseas theaters within CINC timeline requirements. Joint Staff/J4 is chairing a study to determine solutions to alleviate this shortfall.

Pre-positioning

- Pre-positioning is a vital facet of our strategic mobility triad. It permits us to respond more quickly to developing crises and enhances our ability to deter aggression and war. Pre-positioning also helps offset our reduced forward-deployed presence and decreases reliance on scarce strategic lift assets. The two main components of our global pre-positioning strategy require robust investment to ensure their continued viability.
- Afloat Pre-positioned Force: Each service maintains pre-positioned equipment aboard approximately 30 ships stationed in the Mediterranean Sea, and Indian and Pacific Oceans. This flexible method of pre-positioning provides timely equipment and supplies to the geographic CINCs. Continued investment in these strategic assets will help improve responsiveness and deliver greater capability to the warfighter.
- Land-based Pre-positioning: We currently pre-position equipment and supplies in several European, Southwest Asian, and Pacific Rim countries. Our overseas commands rely on this equipment to support the earliest stages of their war and contingency plans. As global threats evolve, we continually tailor our pre-positioned assets to meet the warfighting CINCs, most critical requirements.

Infrastructure

- En Route Infrastructure Improvements (Europe and Pacific). The current strategic airlift enroute infrastructure system comprises seven bases in the Pacific and six in Europe. Improvements to ramps, fuel hydrant systems, and fuel storage systems are needed for these bases to handle the transiting C-5s and C-17s en route to the theaters.
- Critical Infrastructure Protection (CIP) is mandated through Presidential Decision Directive 63. DOD is identifying what truly is mission-critical (i.e., no Plan B for a particular go-to-war capability at a particular node) and assessing and remediating vulnerabilities at those locations.
- Ammunition infrastructure improvements to ensure efficient ammunition flow from depot to destination from CONUS depots to railcar availability to CONUS ports to overseas destinations. DOD must improve its container-handling equipment and intermodal capabilities.
- Assured Access. The MRS-05 study pointed out shortfalls in lift, especially commercial railcars, to carry large volumes of ammunition and unit

equipment from origins to ocean ports. Assured Access program now underway will negotiate DOD agreements with carriers, specifying how much equipment is needed and when during a contingency.

MILITARY PAY

17. Senator THURMOND. General Shelton, although I strongly support increased pay and allowances for our dedicated military personnel, I believe we must set a goal on what we hope to achieve. If we continue to increase pay and compensation under the current system, we build expectations that may not be achievable considering all the other requirements to maintain our readiness. What is your ultimate goal for the level of military pay?

General SHELTON. The Department's ultimate goal is to attract and retain quality personnel in numbers sufficient to sustain the National defense. To do so, the Department needs to remain competitive with the civilian sector in terms of pay and compensation. The proliferation of technology and information-based systems and the changing nature of warfare have increased the demand for highly trained, technically proficient men and women in the Armed Forces.

The 9th Quadrennial Review of Military Compensation (9th QRMC) recommends changes that would not only raise the level of pay for some grades, but would alter the structure of the pay system as well. The pay raise slated for fiscal year 2002 and your continued support of our efforts to bring military pay in line with the civilian sector, such as the Employment Cost Index +.5 percent initiative, will further improve the quality of life for our Service members and their families.

LARGE DECK CARRIERS

18. Senator THURMOND. General Shelton, as you may be aware, there has been an ongoing debate in the press on the vulnerability of our large deck carriers. What are your views on our carriers vulnerability in future operations?

General SHELTON. Carriers have been our first on-scene presence in many operations over the past decade, protecting our economic, political, and security interests in both peace and conflict. I do not see their mission changing in the near future.

To place the on-going debate in context, press articles often do not account for the challenges of identifying and targeting a mobile platform. If we consider carriers vulnerable to missiles, then land bases and land assets share the same vulnerability if not more.

With that premise, the question becomes "How survivable are carriers?"

The answer is, they are very survivable.

An enemy not only has to locate, target, and launch a weapon at what is an extremely mobile platform, but that same weapon has to penetrate the carriers layered defense systems. Carriers are survivable because of limitations in weapon systems acquisition capabilities versus the carriers' mobility, offensive, and defensive capabilities.

In addition, the Navy is developing an array of air and underwater sensors and capabilities that will only enhance the carriers' survivability in the future.

QUESTIONS SUBMITTED BY SENATOR RICK SANTORUM

UNFUNDED REQUIREMENTS

19. Senator SANTORUM. Secretary Rumsfeld, traditionally, the committee has relied on Service unfunded requirements lists or "UFR lists" as a guide on where best to apply additional resources. That is, these lists have provided Congress with information on the most pressing needs facing the services that are not addressed by the President's Budget Request. Can you update the committee on whether the Services will be permitted to submit UFR Lists for fiscal year 2002? If not, what recommendations or advice will the Department of Defense provide on how best to allocate additional resources for our military branches and defense agencies?

Secretary RUMSFELD. Although I have concerns about this traditional practice of unfunded requirements lists, I have not prevented such lists from being provided to Congress. However, in this or future budget years, I would urge members of Congress to seek recommendations from me on how best to allocate added defense resources—rather than relying on Service lists, which can become dated and which are not a reliable way to identify the Defense Department's most pressing security requirements.

20. Senator SANTORUM. General Shelton, have you begun the process of generating UFR lists? If additional funds were added to the Fiscal Year 2002 Defense Authorization Act, and if Service UFR lists will not be generated, how do you suggest Congress best allocate additional funds for the Military Services? Has the Office of the Secretary of Defense told the service chiefs not to generate UFR lists for fiscal year 2002? Do you have unfunded requirements for fiscal year 2002 that are not addressed by this Budget Amendment?

General SHELTON. The Services provide the resources for the warfighters and as such they can best articulate unfunded requirements. Recently, at the request of Congressman Skelton and with full knowledge by the Office of the Secretary of Defense, the Services provided their fiscal year 2002 unfunded requirements. If additional resources are made available for defense, allocations should reflect inputs from the Services' unfunded requirements.

SUPPLEMENTAL APPROPRIATIONS

21. Senator SANTORUM. Secretary Rumsfeld, traditionally, the Clinton administration used supplemental appropriations bills to fund existing military requirements. Will you require additional or supplemental funds in fiscal year 2002 or is this budget request sufficient for the year?

Secretary RUMSFELD. This budget request should be sufficient for the year. The Bush administration is committed to preparing realistic budgets that will not require supplemental appropriations except for genuine emergencies like war or natural disaster.

SCIENCE AND TECHNOLOGY

22. Senator SANTORUM. Secretary Rumsfeld, the President expressed a desire to pursue "leap ahead" technologies and has been supportive of "skipping a generation" in the weapons system acquisition process. The ability to realize these goals will largely be driven by our investment in our Department of Defense Science and Technology (S&T) Program. These budget accounts support research on many of the key technologies that will be necessary for the Army to transition to its "objective force," for the Air Force and Navy to utilize UCAVs, and for many of our chemical and biological agent protection/detection capabilities.

I am alarmed to see that the funding levels for Basic Research (6.1) and Applied Research (6.2) have remained equal to the levels that were appropriated last year. In addition, I am perplexed to see that Advanced Technology Development (6.3) funding has declined versus last year's appropriated level. Overall, the fiscal year 2002 Amended Budget request asks for less in S&T funding than was appropriated last year. I am doubtful that the Department can realize advances in "leap ahead" technologies or invest in our next generation of engineers and scientists with this level of S&T funding. While I am encouraged to see increases in nanotechnology research and chemical and biological agent research, the fiscal year 2002 Amended Budget request fails to robustly fund our S&T accounts.

How do you intend to support "leap ahead" advances with less money than was requested last year? Since leaders of industry have bemoaned the lack of funding devoted to basic research, how can you assure me that the Department of Defense is strongly supportive of producing the next generation of scientists and engineers?

Secretary RUMSFELD. Determining a sufficient level of S&T investment is not a precise science, rather I believe it is a strategic decision. It has always been the Department's goal to fund S&T at a level adequate to ensure the technological superiority of our Armed Forces. In fiscal year 2001, the Department's total request for S&T funding was \$7.5 billion and our Fiscal Year 2002 Amended Budget request is for a total of \$8.8 billion. This represents an increase of more than 17 percent over the fiscal year 2001 request. A strong S&T program is required to provide options for responding to a full range of military challenges both today, and into the uncertain future. The Department's investment in S&T develops the technology foundation necessary for our modernization effort, and fosters the development of "leap ahead" technologies that produce revolutionary capabilities. DOD must continue to invest broadly in defense-relevant technologies because it is not possible to predict in which areas the next breakthroughs will occur. It is the Department's objective to grow the S&T budget to be 3 percent of the total DOD top-line budget as soon as possible. This goal is consistent with the industrial model of investing 3 percent of a corporation's budget in research. However, we also need to ensure that the funding levels of the various components in the Department's total budget

are balanced based on our assessment of the most urgent requirements at any given time.

With respect to your second question, the Department of Defense gives a high priority to basic research and to the training of future scientists and engineers in defense-critical fields. DOD basic research is a wellspring of new knowledge and understanding that underpins future defense technologies. Moreover, the DOD basic research program provides the majority of the Department's support to students pursuing advanced degrees in defense-critical science and engineering fields, helping to ensure the future availability of talent for defense needs. The Fiscal Year 2002 Amended Budget request of \$1.3 billion for basic research is more than 8 percent above the fiscal year 2001 request of \$1.2 billion. Our carefully considered judgment is that this level of basic research investment makes most sense within available resources, given that we must maintain a good programmatic balance among all of the components of research, development, test, and evaluation (RDT&E). A balanced RDT&E investment strategy is important to help assure that basic research results are fully utilized in a timely way, through technology transition to applied research and ultimately to development of defense systems.

TRANSFORMATION

23. Senator SANTORUM. General Shelton, last year, the Army terminated or restructured seven programs to pay for the Chief of Staff of the Army's "transformation" initiative. The Army believed these terminations and re-structuring were necessary because the Office of the Secretary of Defense was unable to provide additional funds to support transforming the Army. Congress then restored several of these programs because of existing Army requirements. What assurance can you provide that the Army's transformation initiative is fully funded in the Fiscal Year 2002 Budget Amendment? If the transformation effort is not fully funded, what are some of the tradeoffs or choices that the Army will have to consider seeing that this effort is adequately funded? What is the funding level for the S&T efforts that are necessary to support the Army's "objective force?"

General SHELTON. Transformation is an evolutionary process and the Fiscal Year 2002 Amended Budget represents a balanced program, which maintains an Army, trained and ready. To support the Army's future goals, significant funding increases for transformation and science and technology development have been included as part of the President's Amended Budget. The service can best articulate in any discussion pertaining to Transformation tradeoff decisions.

QUESTIONS SUBMITTED BY SENATOR PAT ROBERTS

BOMBERS

24. Senator ROBERTS. Secretary Rumsfeld, I understand that within the Air Force and with other supporters, there is an effort to reopen the B-2 line. Part of the justification for the cuts in the B-1B program is to free up funds to support needed modernization accounts. The strong suggestion is that funds for modernization of this very capable platform are scarce—and probably for other programs as well. What is the justification for opening the B-2 line while reducing the inventory of the B-1B because of funding? If the numbers of long range precision bombers is an issue, why spend significant scarce dollars when the current inventory could be modernized at a substantially less cost?

Secretary RUMSFELD. It is premature to say that the Department supports efforts to reopen the production line of the B-2 bomber. Funding provided in fiscal year 2002 for the Next Generation Bomber program is for basic research and development and will be used for introductory flight dynamics and propulsion technology. If the decision is made to enter production of a new bomber then a substantial investment will have to be made. The entire Air Force aircraft fleet is aging, but the fleet of strategic bombers, on average, is the oldest. Their current age is 25 years and it is projected to increase to 33 years if nothing is done to modernize the fleet.

As for the B-1, it is becoming increasingly expensive to maintain the aircraft. I felt it was a prudent decision to reduce the fleet size and take those savings and reinvest them into modernizing the remaining aircraft, because, as you point out, funds for modernization are scarce. Therefore, it was important that funding made available from the reduction in the B-1 inventory be used to modernize and increase the mission capable rates of the remaining B-1 aircraft.

QUESTIONS SUBMITTED BY SENATOR WAYNE ALLARD

SPACE BASED RADAR

25. Senator ALLARD. Secretary Rumsfeld, in earlier visits, we have discussed the importance of the development of space based radar and the disappointment of the cancellation of Discoverer II. Last year's Authorization Bill required a space based radar roadmap to guide the overall effort. Where is the Department on completing the roadmap? How does your budget address space based radar?

Secretary RUMSFELD. The space based radar roadmap is now in final coordination within the Department and should be delivered to Congress in August. While the roadmap uses fiscal year 2008 as a target date for initiating deployment of an operational space based radar system, the specific system architecture and its integration with airborne assets still needs to be defined. The President's Budget request for fiscal year 2002 of \$50 million sustains and expands the space based radar technology effort as well as supports the development of requirements, concepts of operation, and architecture options for a space-based radar system.

SPACE ASSETS

26. Senator ALLARD. Secretary Rumsfeld, I know you understand the importance of protecting our national security and commercial space assets. How does the budget fund surveillance capabilities, asset protection, and attack prevention?

Also, what efforts are underway to coordinate protection against disruption of our space assets between the commercial and defense sectors?

Secretary RUMSFELD. The President's Fiscal Year 2002 Budget requests increased funding to modernize the existing space surveillance network by upgrading the Cobra Dane and Eglin space tracking radars in Alaska and Florida, respectively, as well as improving the Navy's space surveillance "fence." It also requests funds to increase the number and quality of optical sensors in the network to expand coverage and improve resolution of space objects, improve command and control, and pursue development of a space-based sensor to enhance the performance of the existing ground-based surveillance network. With respect to space asset protection, the budget requests increased funds for radiation hardening of electronics as well as other technology development to make satellites, links, and ground control nodes more robust. This includes technology for threat warning that, when coupled with improved intelligence, will provide a greater ability to anticipate and prevent attacks to critical space systems. It also requests funds to develop an approach to space asset protection that addresses commercial assets used to support national security missions.

INTELLIGENCE REQUIREMENTS

27. Senator ALLARD. Secretary Rumsfeld, how does this budget request address shortfalls in our satellite intelligence and communications infrastructure? How will the Future Years Defense Program (FYDP) ensure we have the capacity and flexibility to support our intelligence and communications requirements in the future?

Secretary RUMSFELD. Complete integration of intelligence, surveillance, and reconnaissance systems is a key DOD objective, and remains one of our greatest challenges. Our joint service Distributed Common Ground Systems (DCGS) architecture has made great progress, but much remains to be accomplished through integration of DCGS and National Mission Ground Stations to meet the TPED requirements associated with our advanced tactical sensors and future overhead collectors. New sensors and deployment schemes are being examined that could provide important intelligence information to military commanders on the battlefield as well as to decision-makers assessing foreign leadership intentions.

Evolution of a Defense Surveillance Architecture of integrated surveillance platforms, networks and databases is a top priority for meeting DOD requirements in the next 5 to 10 years. The Department is currently implementing a Surveillance Integration initiative to integrate both airborne and space surveillance systems. We must add also new collection capabilities, such as the proposed Space Based Radar system.

It is critical that we continue ongoing efforts to improve collection from both space and airborne collectors. This includes sensor developments such as Hyperspectral Imagery and chemical/biological ground sensors; and platform developments such as stealth and tactical UAVs. We must deliver the Future Communications Architecture, which will allow individual collectors and-ground processing elements, DCGS and MGSs to inter-operate and relay data more efficiently and effectively.

In the communications arena, our goal is to provide our forces with the ability to connect to a ubiquitous information grid, requiring only the correct communications equipment with the correct security capabilities. The most significant shortfalls in meeting this goal are in satellite communications (SATCOM) and terrestrial communications. SATCOM offers a unique capability for expeditionary forces by allowing reliable command and control connectivity from the national command authorities to the forces afield, independent of any infrastructure where forces are operating. Both spacecraft and connecting ground communications equipment procurements have lacked synchronization and are being addressed by the QDR and program initiatives.

System replacement is the near term issue, and DOD has begun the planning and design activities required to execute the replacement of the existing Defense Satellite Communication, MILSTAR, and UHF Follow-On Systems. Looking further into the future, technologies that will provide exponential increases in communications throughput, security, and responsiveness are also being studied. The National Security Space Architect has been tasked to examine space assets, while another task group is developing an Information Superiority Investment Strategy. Both groups are reviewing the shortfalls and are providing the recommendations that span the DOD infrastructure.

To meet our communications requirements, in the next 5 to 10 years, we will continue to develop an integrated architecture and achievable roadmap for the acquisition of communications satellites. Replacement of the existing communication satellite constellations, MILSTAR, UHF Follow On, and the Defense Satellite Communication System will remain a priority.

In concert with new platform acquisitions and expanded use of commercial communications, we will continue our dedicated efforts to deliver the Global Information Grid (GIG). The communication systems, computing systems and services, software applications, data, and security services comprising the GIG provide the force structure the ability to decisively maintain information superiority over current and potential adversaries. The GIG represents the integrating construct and architecture for the DOD's use of information technology that supports warfighting and other important national security purposes. The GIG includes all Defense and Intelligence Community Information Technology (including that which is embedded in airborne and space platforms). We plan to continue to develop and enforce DOD interoperability policy and implement key initiatives such as the Global Command and Control System, Defense Message System, and the Cooperative Engagement Capability. We also plan to continue and strengthen our interoperability efforts with our alliance partners.

COMPUTER NETWORK DEFENSE

28. Senator ALLARD. Secretary Rumsfeld, a recent Defense Science Board study stated that the U.S. military is severely lacking in the area of computer network defense. They must spend up to \$3 billion per year or \$1.4 billion more than today on computer security technologies and training and recruitment of qualified individuals. What is the DOD response in this budget to this important and complex problem?

Secretary RUMSFELD. The revised fiscal year 2002 budget submission has addressed some of these issues and has included an increase of \$142 million for efforts in training education and retention, cryptographic modernization, secured wired and wireless communications, computer network defense, global information grid, and network intrusion detection. The Quadrennial Defense Review, which is currently on going, also addresses these issues and has identified additional requirements. Efforts will be made to accommodate these requirements in the upcoming program build process.

ANTHRAX VACCINE

29. Senator ALLARD. Secretary Rumsfeld, there have been discussions regarding the need for a second facility to produce the anthrax vaccine. Do you address this issue in the budget?

Secretary RUMSFELD. Yes, the Department of Defense is currently planning for construction of a government-owned, contractor-operated (GOCO) biological defense vaccine production facility on a generic site. The site selection process will be conducted in a fair and open manner. A GOCO biological defense production facility will accommodate three bulk vaccine production suites, each with different production technology processes: spore-forming bacteria (e.g., anthrax), a microbial fer-

mentation, and tissue culture (viral vaccines). A modular design will allow flexibility and expandable manufacturing capacity for production of DOD-critical vaccines, such as anthrax, that are intended for force protection and licensing by the Food and Drug Administration.

Regarding specific funding, there is \$0.7 million in the Fiscal Year 2002 Military Construction, Defense-wide budget to support initial planning and design efforts. Also, \$2.4 million in PE 0604384BP is in the President's Fiscal Year 2002 Budget Request to establish a program management office for a biological defense vaccine production facility.

OPTEMPO

30. Senator ALLARD. Secretary Rumsfeld, we often hear reports that the PERSTEMPO and the OPTEMPO are too high and that you are having difficulty maintaining them with the current force structure. An increased reliance on the Reserve components has had a positive effect, but they too are suffering from a high OPTEMPO. At the readiness hearing last September, the service chiefs implied that the Quadrennial Defense Review would likely return a recommendation to increase the size of our force structure, particularly in the Army. Do we need an increase in force structure? How are you going to reduce the effects of a high OPTEMPO?

Secretary RUMSFELD. I also share your concerns about tempo strains on U.S. forces. This issue is under examination in the Quadrennial Defense Review.

QUESTIONS SUBMITTED BY SENATOR TIM HUTCHINSON

SPECTRUM INTERFERENCE

31. Senator HUTCHINSON. Secretary Rumsfeld, I know that there have been discussions within the Department of Defense about the future of the spectrum band that the military currently uses. Certainly, any consideration of changing the DOD's spectrum should have as its primary goal the maintenance and enhancement of our military's communications system.

The military's spectrum is also used commercially in most parts of the developed world. It has been suggested that a stepwise migration to new spectrum could potentially help prevent future interference problems in these areas of the world and could be financed through the sale of the military's current spectrum. Do you believe that such a move could provide national security benefits to our military?

Secretary RUMSFELD. This is an excellent question that has several important issues embedded in it. I would like to provide the bottom line answer first and follow that with my rationale that will address the embedded issues of both "new spectrum" and potential interference to our systems when employed outside the United States.

Essentially, I do not believe the proposal to transition DOD systems from the spectrum band of current interest to other bands has any potential for providing national security benefits. I am, however, willing to objectively participate in the search for the best national solution to the spectrum demand problem.

The specific spectrum band of interest is the 1755–1850 MHz band, which DOD employs for a number of critical major systems. This band is under consideration, along with others, to be designated for use by advanced wireless systems, more commonly referred to as Third Generation cellular systems or "3G". This band is technically Federal Government spectrum, within the borders of the United States, and the DOD is allowed to employ the band as a Government entity and does so in the provision of warfighting capabilities that are vital to our Nation.

First allow me to address the issue of "new spectrum." There could be other spectrum that the DOD would be able to migrate our systems into, but there is no *new* spectrum that can be made available. The idea of providing the DOD other spectrum sounds reasonable but the Nation's two key spectrum regulatory bodies in the Department of Commerce and the Federal Communications Commission have been examining this issue for over a year without finding a workable solution. The DOD systems that operate in this band support functions that we must maintain or else we will seriously degrade our defense capabilities. Losing access to the current band, without first being provided comparable spectrum that is just as useful would weaken the DOD's ability to protect the Nation and cripple our capabilities to execute our global missions.

Second, the responsibility for global missions ties in with your reference to potential interference for our systems when operated in the developed world. You are correct that the band of interest is used in the developed world for commercial systems.

We recognize this and there are reasons why we do not view the situation as a hindrance to fulfilling our obligations in other parts of the world. In the truly developed areas of the world, we employ our systems in training ranges and areas that are quite remote from the commercial sources of potential interference. In those cases where there is a need to use a system in proximity to a commercial source of interference, our spectrum experts with the Combatant Commands coordinate with the proper entities to ensure that any potential interference is avoided. I must also point out that our systems are designed with "spectrum flexibility" so that those who operate them can respond to the constraints we experience when we are in other sovereign nations. Additionally, the majority of situations where we employ critical weapons systems outside our own country are not in the developed world but in the less developed regions where interference from commercial systems is not a concern.

My final point is based on a linkage of the two above issues. Our nation stands alone with global responsibilities and the requirement to consider and, when necessary, apply military force as an instrument of foreign policy. No other country faces the security implications that we face in designating spectrum for commercial purposes. We cannot assume that we can reach a decision on this critical spectrum issue by following the same path or assuming the same options that other countries may have considered. Our decision must truly be made in the best national interest that balances all facets of the issue, including ensuring the maintenance of our vital defense capabilities.

BRAC

32. Senator HUTCHINSON. Secretary Rumsfeld, I am adamantly opposed to a new round of base closures. With a changing strategic environment, the high cost of base closures, and the uncertain benefits, I would be very concerned about the proposal of a new BRAC round.

Does the administration propose a new round of BRAC? It is my understanding that the budget amendment will include something called the "Efficient Facilities Initiative." Is that a new name for BRAC? What would the criteria be for closing military facilities? When does the administration to provide further details on this issue?

Secretary RUMSFELD. The Department will be requesting additional base realignment and closure authority as part of its Efficient Facilities Initiative. The Efficient Facilities Initiative that we are developing supports the Department's efforts to transform its facilities to meet the challenges of the new century. It is not a new name for BRAC, but BRAC is a central part of the initiative. The three main components of the EFI are: authorization of an additional round of base closures and realignments in 2003; authorization of significant improvements in the existing base closure process; and authorization of a set of tools for the efficient operation of enduring military installations.

While the BRAC authority we are requesting uses essentially the same process as has been used successfully before, the proposal would better ensure the primacy of military value in the selection and execution of base closure and realignment decisions. Specific selection criteria will be worked out after Congress has authorized the new BRAC round. We intend to submit this EFI to Congress before its August recess.

[Whereupon, at 5:35 p.m., the committee adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2002

TUESDAY, JULY 10, 2001

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

SECRETARIES AND CHIEFS OF THE MILITARY SERVICES

The committee met, pursuant to notice, at 9:36 a.m. in room SH-216, Hart Senate Office Building, Senator Carl Levin (chairman) presiding.

Committee members present: Senators Levin, Lieberman, Cleland, Reed, Akaka, E. Benjamin Nelson, Carnahan, Warner, Inhofe, Roberts, Allard, Collins, and Bunning.

Committee staff members present: David S. Lyles, staff director; Madelyn R. Creedon, counsel; Gerald J. Leeling, counsel; Peter K. Levine, general counsel; and Christine E. Cowart, chief clerk.

Professional staff members present: Daniel J. Cox, Jr., Creighton Greene, Maren Leed, Michael J. McCord, and Arun A. Seraphin.

Minority staff members present: Romie L. Brownlee, Republican staff director; Judith A. Ansley, deputy staff director for the minority; Charles W. Alsup, professional staff member; Brian R. Green, professional staff member; William C. Greenwalt, professional staff member; Gary M. Hall, professional staff member; Carolyn M. Hanna, professional staff member; Mary Alice A. Hayward, professional staff member; Ambrose R. Hock, professional staff member; Patricia L. Lewis, professional staff member; Thomas L. MacKenzie, professional staff member; Ann M. Mittermeyer, minority counsel; Suzanne K. L. Ross, research assistant; Cord A. Sterling, professional staff member; Scott W. Stucky, minority counsel; and Richard F. Walsh, minority counsel.

Staff assistants present: Gabriella Eisen, Thomas C. Moore, and Michele A. Traficante.

Committee members' assistants present: Menda S. Fife, assistant to Senator Kennedy; Barry Gene (B.G.) Wright, assistant to Senator Byrd; Frederick M. Downey, assistant to Senator Lieberman; Andrew Vanlandingham, assistant to Senator Cleland; Elizabeth King, assistant to Senator Reed; Davelyn Noelani Kalipi, assistant to Senator Akaka; Eric Pierce, assistant to Senator Ben Nelson; Neal Orringer, assistant to Senator Carnahan; Brady King and Jason Van Wey, assistants to Senator Dayton; John A. Bonsell, assistant to Senator Inhofe; Robert Alan McCurry and James

Beauchamp, assistants to Senator Roberts; James P. Dohoney, Jr., assistant to Senator Hutchinson; Arch Galloway II, assistant to Senator Sessions; Kristine Fauser, assistant to Senator Collins; and Derek Maurer, assistant to Senator Bunning.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Chairman LEVIN. Good morning, everybody. The committee meets this morning to receive testimony on the proposed fiscal year 2002 amended budget from the secretaries and the chiefs of the military services. I want to welcome Secretary of the Army, Tom White; Army Chief of Staff, Gen. Eric Shinseki; Secretary of the Navy, Gordon England; Chief of Naval Operations, Adm. Vernon Clark; the Commandant of the Marine Corps, Gen. Jim Jones; Secretary of the Air Force, Jim Roche; and Air Force Chief of Staff, Gen. Mike Ryan.

Before we begin, I just want to take a moment to acknowledge that last night in North Carolina a CH-46 helicopter carrying five marines crashed during a routine training exercise. Three of the marines were killed, the remaining two crew members are hospitalized. Our thoughts and our prayers are with them and their families. General Jones, I just want to express our condolences to you personally while you are here and hope that you will extend all of our condolences to the family and friends of the victims and to the entire Corps.

These tragedies remind us of the risks that men and women in our armed services take every day on our behalf. We are grateful to them and we hope that you will pass along our condolences to the families and the victims.

General JONES. Thank you, sir.

Senator WARNER. May I join our chairman in that, General.

I think one other thing should be pointed out. Regrettably, these types of accidents point out the aging of our equipment. We first started buying that type of helicopter in the sixties is my recollection. How old would you anticipate that air ship to be?

General JONES. About 35 years old, sir.

Senator WARNER. Thirty-five years old. So it is near the very end of its extended life.

Chairman LEVIN. Is the cause of the accident known?

General JONES. It is under investigation, sir. The pilot and the copilot survived and they are in stable condition in the hospital as we speak.

Chairman LEVIN. This is an unusually large panel of witnesses, but we are in an unusual situation. The delay in submitting the fiscal year 2002 amended budget to Congress has left us with just 7 weeks of session to accomplish what typically takes 5 months. We still need the detailed justification books that are essential to our review of the budget request. We just will remind our secretaries here that it is absolutely critical that we get those detailed justification books as soon as possible.

It is becoming increasingly clear that the additional \$18.4 billion in defense spending that the President is requesting for fiscal year 2002, along with any increases in defense spending in future years, cannot be initiated or sustained without using the surpluses in the Social Security and Medicare trust funds or without returning to

budget deficits or without cutting important domestic programs, such as education, health care, and law enforcement.

None of those are acceptable alternatives. The only alternative that I see is to revisit the upper income tax cuts which were recently enacted. But once we address the issue of how we are going to pay for the budget increases that are proposed, we then have to ask whether or not the administration's proposed budget reflects the proper balance between the quality of life and readiness of our military men and women that they need today and the investments that are needed to modernize and transform our Armed Forces to meet the threats of tomorrow.

We will be asking each of our witnesses this morning whether this budget request addresses what they consider to be the priorities of their respective services, both for the near term and the long term. In order for us to evaluate the programs and priorities included in this budget, we also need a clear understanding of what was not included. In recent years each of the service chiefs has provided Congress lists of the key programs that were not included in the annual defense budget request. We will be asking each of the chiefs to provide to this committee the unfunded priorities lists that you provided in past years, similar to those lists at least, so that we can get some understanding, not just of what is requested, but again what has not been able to be funded.

I will also be asking our witnesses their views about some of the choices that were made in this year's budget. For example, this budget request would decrease funding for procurement and for science and technology programs below the current year's level while increasing funding for missile defense programs by \$3 billion or 57 percent over the current year.

The budget request would also reduce Army flying hours and tank training miles in fiscal year 2002 compared to the current year. In the latter case, Secretary Rumsfeld told the committee that "the Army made those kind of choices." The committee looks forward to the testimony of all of the service secretaries and chiefs on the thinking behind these and other difficult choices.

All of us share a responsibility to do our best to ensure that Defense Department programs and activities are conducted effectively and efficiently. In his recent testimony to this committee, Secretary Rumsfeld said: "I have never seen an organization that could not operate at something like 5 percent more efficiency if it had the freedom to do so." He went on to say that: "The taxpayers have a right to demand that we spend their money wisely. Today," he said, "we cannot tell the American people we are doing that. I know I cannot."

That is a very significant and serious statement. If the American taxpayers cannot be assured that the Defense Department is spending their money wisely, we will not be able to sustain public support for the kind of increases in defense spending that are contained in this budget request.

Each of our service secretaries has had extensive experience managing large private sector companies. Secretary Rumsfeld has set up a new senior executive committee and a business initiative council to draw on this experience and to help him manage the Defense Department. I hope each of you this morning will give us rec-

ommendations to improve the management of your respective departments, both those requiring legislation and those that can be implemented without legislation.

Senator Warner.

STATEMENT OF SENATOR JOHN WARNER

Senator WARNER. Thank you, Mr. Chairman. I join you in recognizing our service secretaries and service chiefs, and particularly you, General Ryan. In all likelihood this could be your last appearance before the Senate as you wind up a most distinguished career, preceded by your father, who was also Chief of Staff of the Air Force when I was privileged to be Secretary of the Navy. I remember him well.

What a proud family tradition. It exemplifies here in the United States of America how families, generations of families, have proudly worn the uniform of our country in different services. That is the very bedrock of our professional military force, officer as well as enlisted.

I commend you and your wife and your family for this service.

Chairman LEVIN. General Ryan, let me just join Senator Warner in congratulating you for your distinguished service. I am a little more cautious in saying this is probably your last visit before the committee, but just on that chance, I surely want to join, and I know on behalf of all the members of the committee, in congratulating you and thanking you for an extraordinary career.

General RYAN. Thank you, sir.

Senator WARNER. Across our country we detect a growing consensus, and indeed here in Congress. The American people want to improve the quality of life for those who serve in uniform. They want to obtain modern equipment for those who constantly take the risks, whether here at home, as we saw last night, or abroad.

I can think of no more important building block in the budget process than the testimony that is provided by those who proudly serve as the service chiefs in our military departments. I just go back over the past few years, because we look to you for the complete professional opinions that each of you are able to give. With due respect to the Commander in Chief, whoever that may be, this committee time and time again has called upon you to give us your personal views with regard to the budget levels and the issues.

Indisputably, our Armed Forces are the best and the most powerful in the world today. This well-deserved reputation was not earned without cost. While our service men and women perform their military missions with great dedication and professionalism, our people, our equipment, and our infrastructure are increasingly stressed by the effects of an unprecedented number of military deployments over the past decade, combined with years of decline in defense spending.

At the same time our force structure was declining in size by almost 40 percent, our overseas deployments for peacekeeping and other military operations increased by over 300 percent. As the service chiefs have told us repeatedly, future readiness and the upkeep of military facilities has been deferred to pay for current operations and maintenance, and service personnel are being asked to do more with less—less people, less resources.

In the past week I have visited seven military installations in my State and, General Jones, I spoke with you about Quantico. Am I not correct that it has been 60 years since we put a new housing unit for either an enlisted or an officer on that base?

General JONES. That is correct.

Senator WARNER. Those things simply have to be corrected, and I am hopeful that we can make progress in this budget.

We have tried here in Congress in the past several years, together with my distinguished colleague here Mr. Levin. We have worked together as a team to increase defense spending. In fiscal year 2000, we reversed a 14-year decline in defense spending by authorizing a real increase in spending that year. Last year we continued that momentum by providing an even larger real increase for defense for fiscal year 2001. Over the past years we have increased military pay by over 8 percent, restored retirement and health care benefits to keep faith with those who serve or have served, raised procurement levels to begin recapitalization and modernization of aging equipment, and I think significantly increased investment in research and development.

We have to keep that momentum going forward, and we must rely on you for your opinions as to whether the budget now before us is adequate to keep that momentum.

Again, while much has been done, much remains. The President is to be commended. I just looked at this fiscal 2002 defense request and our calculations are that \$38.2 billion in increases have been recognized and requested by President Bush. These increases proposed in 2002 represent an almost 11 percent increase in defense spending above the amount available in 2001.

While this increase begins to address the shortfalls, it may not be enough, and we look to you for those answers.

I talked with my distinguished chairman this morning about the \$18.4 billion increase. We still have a battle on our own home front here with our Budget Committees. They have an across-the-board responsibility for the entire budget and we will do our best. I will join our chairman in trying to support in every way the President's request before those committees.

So this is a very, very important hearing today. I think it is wonderful to go back to the old style of having the service secretaries appear side-by-side with the service chiefs, because it is a partnership between the civilian oversight and the military chief as you work your way for your respective departments. Let us do our best.

Thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Warner.

In the interest of time and in order to give the members chances to get into specific issues in their questions, I am going to ask our witnesses now to limit their opening remarks to 7 minutes. Secretary White, we will begin with you.

STATEMENT OF HON. THOMAS E. WHITE, SECRETARY OF THE ARMY

Secretary WHITE. Thank you, Mr. Chairman, Senator Warner, distinguished members of the committee. I appreciate this opportunity to discuss the state of America's Army. Consistent with your

guidance, Mr. Chairman, I will make a very brief statement and then submit a longer statement for the record.

Chairman LEVIN. All your statements will be made part of the record.

Secretary WHITE. Thank you.

General Shinseki and I want to talk to you today, against the backdrop of the President's 2002 amended budget, about our progress in achieving the Army's vision. In our written testimony, we described the magnificent work the Army has done in recent months and identified the challenges we continue to face.

There is still much work to be done, but the Army has moved up. We are transforming in comprehensive and profound ways into the most strategically responsive and dominant land force of the 21st century, decisive across the entire spectrum of military operations. That being said, I want to be very straightforward about what this budget does and does not do for the Army.

First, the budget will put us on the road to recovery in some categories, such as military pay, housing allowances, and health care. Second, it will start an improvement, but leave us short of our goals, in other areas, such as restoring our deteriorating infrastructure. Third, unfortunately, there will continue to be shortfalls in a number of critical areas, such as modernization and recapitalization of the existing force.

Recognizing these budget shortfalls, we must look elsewhere for cost savings. The key to this effort is the freedom necessary to efficiently manage the Army and generate near and long-term savings for reinvestment. Given that latitude, we hope to improve efficiency within the Army by adopting better business practices, focusing on our core competencies, outsourcing or privatizing where it makes sense, and streamlining processes to reduce operating costs.

Success will be achieved by the redirection of resources to fully fund the pillars of the Army's Vision: People, Readiness, and Transformation.

Thank you, Mr. Chairman. I look forward to the committee's questions.

[The joint prepared statement of Secretary White and General Shinseki follows:]

PREPARED JOINT STATEMENT BY HON. THOMAS E. WHITE AND GEN. ERIC K. SHINSEKI, USA

Mr. Chairman and distinguished members of the committee, we thank you for this opportunity to report to you today on the United States Army's readiness to provide for our Nation's security today and in the future.

The Army exists for one purpose—to serve the Nation. For over 226 years, American soldiers have answered the Nation's call to duty, faithfully and selflessly performing any mission that the American people have asked of them. The soldiers are the common denominator that has allowed us to enjoy economic prosperity and stability in a rapidly changing global environment.

Throughout that time, the Army—active component, Army National Guard, U.S. Army Reserve, and Army civilians—has maintained its non-negotiable contract with the American people to fight and win the Nation's wars decisively. Indeed, the Army stands ready to go into harm's way whenever and wherever we are asked. Today, The United States Army is the most formidable land force in the world, a fact that reassures allies and deters adversaries.

Today, the Army must also be capable of executing the broader requirements of the National Security Strategy and National Military Strategy across the full spectrum of operations. The commitment and dedication of Army soldiers and civilians,

coupled with the support of the administration and Congress, are allowing the Army to meet its requirements as the decisive landpower component of the U.S. military.

The bipartisan support of Congress during the past 2 years has helped the Army build sustainable momentum for its Transformation. We want to talk to you today, against the backdrop of the President's 2002 amended budget, about where we are in achieving the Army Vision. In our testimony, we will describe the magnificent work the Army has done in recent months and identify the challenges we continue to face. There is still much work to be done, but the Army has moved out. It is transforming in comprehensive and profound ways to be the most strategically responsive and dominant land force of the 21st century—decisive across the entire spectrum of military operations.

The budget for fiscal year 2002 ensures the Army is funded at sufficient levels to support the National Security and National Military Strategies. It funds people programs to man the force and address quality of life issues relevant to our soldiers and their families, ensures our continued warfighting readiness, and advances the Army's Transformation to a full-spectrum 21st century force. It is a balanced base program that allows the Army to meet these objectives. It includes significant increases for installation services and infrastructure, mitigating the necessity to divert training funds to installation support.

The Army Transformation is enabled, although not at the optimal level. The Army is accepting moderate risk in the level of training OPTEMPO, but these risks are considered acceptable to ensure stable base operations levels and improved facility maintenance and repair. Sustainment programs also remain stable, and we are able to begin some modernization of our aging helicopter fleet.

Today, the Army's active component "go-to-war" force is forward stationed, deployed, or in the field—advancing our National interests, supporting theater engagement plans, and training for tomorrow's warfight. But, our Army is one-third smaller, deploys more frequently, and is more likely to conduct stability and support operations than its Cold War predecessor. Accelerating operational and deployment tempos have strained Army capabilities, and over-stretched resources have leveraged our warfighting readiness on the backs of our soldiers and their families. Indeed, our mission demands create a requirement for forces that increasingly can only be sustained by committing the Reserve components. When we speak of the Army—Active and Reserve components, soldiers, civilians, family members, retirees, and veterans—we are acknowledging a single force with common missions, common standards, and common responsibilities.

The Army has competing requirements that are in constant, daily tension. First is the Army's requirement to have a trained and ready force to fulfill its non-negotiable contract with the American people to fight and win our Nation's wars decisively. That mission is significantly enhanced by being fully engaged around the globe with our allies, partners, and sometimes our potential adversaries to promote stability, to gain influence, and to ensure access in times of crisis. Further, as contingency operations become long-term commitments, our mission tempo—both training and operational—increasingly strains our force structure. Second, but most important, the Army must transform itself into a force for the 21st century, strategically responsive and dominant at every point on the spectrum of military operations and prepared to meet a growing array of requirements including threats to our homeland. The mismatch between strategic requirements and operational resources forces us daily to prioritize among support for our people, the readiness demanded by the Nation, and the transformation necessary to continue our global preeminence.

THE ARMY VISION

More than 10 years ago, during the buildup of Operation Desert Shield, the Army identified an operational shortfall—a gap between the capabilities of our heavy and light forces. Our heavy forces are the most formidable in the world. There are none better suited for high-intensity operations, but they are severely challenged to deploy to all the places where they might be needed. Conversely, our magnificent light forces are agile and deployable. They are particularly well suited for low-intensity operations, but lack sufficient lethality and survivability. There is, at present, no rapidly deployable force with the staying power to provide our national leadership a complete range of strategic options. The requirements dictated by the rapidly evolving world situation increasingly underscore that capability gap; therefore, the Army is changing.

To meet the national security requirements of the 21st century and ensure full spectrum dominance, the Army articulated its vision to chart a balanced course and shed its Cold War designs. The vision is about three interdependent components—

People, Readiness, and Transformation. The Army is people—soldiers, civilians, veterans, and families—and soldiers remain the centerpiece of our formations. Warfighting readiness is the Army's top priority. The Transformation will produce a future force, the Objective Force, founded on innovative doctrine, training, leader development, materiel, organizations, and soldiers. The vision weaves together these threads—People, Readiness, and Transformation—binding them into what will be the Army of the future.

ACHIEVING THE ARMY VISION

Last year, the Army took the initial steps to achieve the vision. One step was the continued realignment of our budget priorities, generating investment capital by canceling or restructuring eight major Army procurement programs. Unfortunately, the Army has had to eliminate or restructure 182 programs over the past decade and a half. It is not that these systems and capabilities were unnecessary; rather, our resource prioritization made the programs unaffordable. Joining with the Defense Advanced Research Projects Agency in a cooperative research and development effort, we began to streamline our acquisition process to focus and accelerate the development and procurement of enabling technologies for our Objective Force. To reduce the risk from the capability gap between our heavy and light forces, the Army developed a concept and began to organize an interim capability until the 21st Century Objective Force is fielded. The Army also completed a comprehensive study of how it trains soldiers and grows them into leaders, knowing that the capabilities of a transformed Army will reside in competent, confident, adaptive, and creative people.

PEOPLE

The fiscal year 2002 budget continues to emphasize people, the core of our institutional strength. Well-being—the physical, material, mental, and spiritual state of soldiers, families, and civilians—is inextricably linked to the Army's capabilities, readiness, and its preparedness to perform any mission.

To improve well-being, we are offering technology-based distance learning opportunities; working to improve pay and retirement compensation; working with the Department of Defense to guarantee that TRICARE meets the needs of our soldiers, retirees, and their families; improving facilities maintenance; and modernizing single soldier and family housing. The much welcomed increases in housing allowance and efforts to reducing out of pocket expenses is an important step toward restoring faith with our soldiers and their families.

The health care provisions in the Fiscal Year 2001 National Defense Authorization Act for our soldiers, retirees, and family members represent the types of significant improvements the Army continues to seek for the force's well-being. Sustained congressional support for important well-being initiatives helps us recruit and retain a quality force.

Indeed, the pay raise, pay table reform, and retirement reform, as well as diligent efforts by leaders at all levels of the Army helped us exceed our recruiting and retention goals in fiscal year 2000. Attention to the well-being of our people will keep trained and qualified soldiers and civilians in the Army in the years to come.

MANNING

In fiscal year 2000, we started a 4-year effort to increase personnel readiness levels. The Manning Initiative redistributed soldiers to fill all personnel authorizations in every active component combat division and cavalry regiment, but by doing so, we accepted some risk in the institutional base.

This effort exposed the serious gap that has existed in the aggregate between manning requirements and authorizations. It is possible that we will need to increase personnel authorizations to meet all requirements, dependent upon ongoing reviews of overall Army missions. Meeting the requirements with the active component, however, is not enough. As mission demands necessitate increased use of our Reserve components, we must bolster their full-time support requirements to better keep them ready and available. Manning the entire force will reduce operational and personnel tempo and improve both readiness and well-being.

The fiscal year 2002 budget increases for enlistment and retention bonuses will enable the Army to sustain its recent recruiting and retention successes, although some shortfalls remain. Funding for change-of-station moves helps to ensure we can place soldiers when and where they are needed to man units at desired grade and skill levels, and further advance the Army's Transformation.

GLOBAL ENGAGEMENT

Readiness is a top priority. It means we must be prepared to execute strategic missions across the full spectrum of operational requirements around the globe. Our military formations must be able to conduct a range of activities from engagement to stability and support operations to warfighting. On any given day, the Army has nearly 125,000 soldiers and 15,000 U.S. civilians forward stationed in over 100 countries around the world. In fiscal year 2000, on a daily average, we deployed more than 26,000 additional soldiers for operations and military exercises in 68 countries—from East Timor to Nigeria to the Balkans. In Bosnia, the Texas Army National Guard's 49th Armored Division assumed the mission for the Multinational Division (North), the first time since World War II that a Reserve component division headquarters has led active component forces in an operational mission. In both Europe and Korea, Army soldiers continue a successful security commitment made 50 years ago. In Southwest Asia, the Army continues its support of United Nations sanctions against Iraq, stability operations in the Persian Gulf, and peace-keeping efforts in the Sinai. No other military service works as frequently, as continuously, or on as many levels to deter aggression, operate with allies and coalition partners, and to respond at home and abroad with support to civil authorities.

CIVIL SUPPORT

The Army provides military support to civil authorities, both domestically and around the globe, for crisis response and consequence management. Army support after natural disasters ranged from personnel and equipment to suppress wildfires to logistical and medical support following the disasters in the South African, Central American, and Asian Pacific regions. Last year, within the United States, the U.S. Soldier and Biological Chemical Command trained over 28,000 people and conducted crisis response and consequence management exercises in 105 cities with Federal agencies, state and local governments, and non-government organizations in support of the Domestic Preparedness Program. The Army Corps of Engineers prevented an average of \$21.1 billion in damages through flood control management projects including 383 major flood control reservoirs and 8,500 miles of flood control levees as part of its flood fighting authority and the Federal Response Plan. The Army supported civil law enforcement agencies in more than 380 counter-drug operations in 41 states. Finally, as part of a joint program, the Army led the development and testing of a fixed, land-based National Missile Defense system that offers the most mature technology for a near-term deployment decision. The Army stands ready to respond to the full breadth of security requirements in the homeland and abroad now and in the future.

READINESS

The fiscal year 2002 budget request supports our most critical readiness requirements, although we have accepted some risk in the level of funding for active component air and ground OPTEMPO to stabilize the deterioration of our facilities and augment training enablers.

Measuring the readiness of the Army to respond to the Nation's call requires accuracy, objectivity, and uniformity. Our current standards are a Cold War legacy and reflect neither the complexity of today's strategic and operational environments nor other important factors. Near-term factors encompass the overall capability of units to deploy and include training enablers such as training ranges, institutional support, and depot maintenance; full time support for our Reserve components; and installation support. Long-term readiness factors affect the Army's ability to fight in the future and to retain quality personnel. We are re-examining how to measure Army readiness in the near-term, the long-term, and across the range of missions we may be expected to undertake. This new reporting system will provide timely and accurate information on the status of the Army's readiness, with measurements that are relevant and quantifiable, to enhance the ability of commanders to make the best possible employment decisions. It will also give the American people a more accurate assessment of how ready their Army is to do what it is asked to do.

INSTALLATION READINESS

Installations are an essential, but often overlooked, part of our warfighting readiness. They support soldiers and their families, enhance the rapid deployment of the Army, and provide efficient and timely support to deployed formations. Funding facility Sustainment, Restoration and Modernization (SRM, formerly termed Real Property Maintenance, or RPM) accounts is one of the Army's greatest concerns this year. We must maintain, modernize, and transform the training platforms and

ranges that prepare the force; the depots and arsenals that maintain and equip the force; and the power projection platforms and information infrastructures that support the force when deployed. The fiscal year 2002 budget provides military facilities and soldier housing needed to improve Army readiness, quality of life, and efficiency. The military construction projects provide new and renovated facilities that improve strategic mobility, modernize barracks, and support the missions of the Army's active and Reserve components. The family housing budget includes funding for operation, maintenance, leasing, construction, revitalization and privatization of housing in the U.S. and overseas. Only by taking care of installation infrastructure now can the Army secure readiness for the future also.

In the past, we paid other bills at the expense of facilities upkeep or masked these costs by migrating funds from operating tempo accounts—a practice we have stopped.

Of course, the Army would prefer to divest itself of excess infrastructure and receive full funding to maintain installations and repair critical facilities. The Army's current goal is to sustain facilities to a level that prevents further deterioration and to improve both the quality and the quantity of facilities to meet validated deficits in strategic mobility by fiscal year 2003, barracks by fiscal year 2008, and family housing in fiscal year 2010.

However, even with this significant investment, our overall infrastructure condition continues to decline. While the budget meets the Army's strategic mobility goal of fiscal year 2003, we need sustained funding to achieve our goals of barracks renewal and family housing upgrade. Previously, we have funded SRM at only 60 percent. The significant increase of SRM funding to 94 percent for fiscal year 2002 will allow the Army to aggressively attack its deteriorating infrastructure and impede the growth in the backlog of maintenance and repair. We currently have an unfunded SRM backlog of \$17.8 billion and an unfunded facilities deficit of \$25 billion. The solution requires a 30-year commitment to fully fund and focus SRM funding on selected facility types, in 10-year increments. Army installations will take on a greater role as we attempt to reduce the deployed logistical footprint and rely on reach-back links for enhanced command and control capabilities. Transformation of our operational force without a concurrent renovation of the installation infrastructure will create an imbalance that will impinge on advantages gained by a transformed force.

TRANSFORMATION

The third thread of the Vision requires a comprehensive transformation of the entire Army. This complex, multi-year effort will balance the challenge of transforming the operational force and institutional base while maintaining a trained and ready force to respond to crises, deter war and, if deterrence fails, fight and win decisively. Transformation is far more extensive than merely modernizing our equipment and formations. It is the transformation of the entire Army from leader development programs to installations to combat formations. All aspects—doctrine, training, leaders, organization, material, and soldiers—will be affected.

Transformation of the Army's operational force proceeds on three vectors—the Objective Force, the Interim Force, and the Legacy Force. All are equally necessary to our Nation's continued world leadership. The Objective Force is the force of the future and the focus of the Army's long-term development efforts. It will maximize advances in technology and organizational adaptations to revolutionize land-power capabilities. The Interim Force will fill the current capability gap that exists between today's heavy and light forces. Today's force, the Legacy Force, enables the Army to meet near-term National Military Strategy commitments. Until the Objective Force is fielded, the Legacy Force—augmented or reinforced with an interim capability—will continue to engage and respond to crises to deter aggression, bring peace and stability to troubled regions, and enhance security by developing bonds of mutual respect and understanding with allies, partners, and potential adversaries. It must remain ready to fight and win if necessary, giving us the strategic hedge to allow transformation.

The fiscal year 2002 budget supports procurement and upgrade of important Legacy, Interim, and Objective Force systems. It procures 326 Interim Armored Vehicles and five Wolverine systems. It also continues support for the Abrams-Crusader common engine program and both the Abrams and Bradley upgrade programs. Finally, it accelerates two M1A2 system enhancement program retrofits.

As the Army works to develop and acquire the technologies for the Objective Force, the Legacy and Interim Forces will guarantee Army readiness. Our most pressing concerns this year include the modernization and recapitalization of selected Legacy Force systems.

LEGACY FORCE MODERNIZATION AND RECAPITALIZATION

Recapitalization and Modernization efforts are necessary to ensure current and near-term warfighting readiness. Currently, 75 percent of major combat systems exceed engineered design half-life and will exceed design life by 2010; system operation and sustainment costs are up over 35 percent, and aircraft safety of flight messages are up 200 percent since 1995.

We must judiciously modernize key armored and aviation systems in the Legacy Force to enhance force capabilities. We will further digitize the Abrams tank to increase situational awareness and remanufacture early model Bradley infantry fighting vehicles to improve lethality, situational awareness, and sustainability. We will procure new systems like Crusader to increase force effectiveness, reduce friendly casualties, ease logistics support requirements, and improve deployability. Crusader will maximize the total capabilities of the Legacy Force. Fielding the Patriot Advanced Capability-3 missile defense upgrade and the Theater High Altitude Area Defense system will significantly increase our in-theater force protection. Current legacy forces will benefit from upgrades and enhancements to proven systems. Interim forces will demonstrate the power of developmental and off-the-shelf communications and intelligence capabilities. The Army has made the hard decisions for selective modernization to sustain combat overmatch. What is needed is continued support for our prudent investment strategy to keep our force strong and credible.

Concurrently, the Army will selectively recapitalize Legacy Force equipment to reduce the rapid aging of our weapons systems. The fiscal year 2002 budget takes a step in this direction by providing additional funding to depot maintenance in preparation for recapitalization. The Army has determined that we preserve readiness best and most cost effectively when we retire or replace warfighting systems on a 20-year Department of Defense modernization cycle. Today, 12 of 16 critical weapons systems exceed this targeted fleet average age. As systems age, they become more costly and difficult to maintain in peak warfighting condition. They lose combat overmatch with respect to an adversary's modernized systems. The Army has established a selective recapitalization program that will restore aging systems to like-new condition and allow upgraded warfighting capabilities for a fraction of the replacement cost. We must maintain the readiness of the Legacy Force until the Objective Force is operational. As the Legacy Force maintains our strategic hedge and the Interim Force bridges the capability gap, the Army will build the Objective Force and complete the Vision for a trained and ready 21st Century Army.

THE INTERIM FORCE

The fielding of the Interim Force fills the strategic gap between our heavy and light forces and is an essential step toward the Objective Force. The key component of the Interim Force is the Interim Brigade Combat Team (IBCT), the first of which is being organized at Fort Lewis, Washington. Its primary combat platform, the Interim Armored Vehicle (IAV), will fulfill an immediate requirement for a vehicle that is deployable any place in the world arriving ready for combat. The IAV will consist of two variants, a mobile gun system and an infantry carrier with nine configurations. The IAV will achieve interoperability and internetworked capability with other IBCT systems by integrating command, control, communications, computer and intelligence, surveillance, and reconnaissance systems. Congress supported the IBCT concept with an additional \$600 million in the fiscal year 2001 Defense Appropriations Act for IAV procurement and organizing the second IBCT. The Army has programmed resources to field six to eight IBCTs.

The Army will train and test soldiers and leaders in the doctrine and organization of these new units to ensure that they can respond to operational requirements. An IAV-equipped battalion-sized element will undergo training and initial operational testing and evaluation to guarantee system suitability and effectiveness. Innovative applications and technology insertion in supporting forces will complete the IBCT package and enable full operational capabilities for the first IBCT in 2005.

THE OBJECTIVE FORCE

The Army's ultimate goal for Transformation is the Objective Force. Operating as part of a joint, combined, and/or interagency team, it will be capable of conducting rapid and decisive offensive, defensive, stability and support operations, and be able to transition among any of these missions without a loss of momentum. It will be lethal and survivable for warfighting and force protection; responsive and deployable for rapid mission tailoring and the projection required for crisis response; versatile and agile for success across the full spectrum of operations; and sustainable for extended regional engagement and sustained land combat. It will leverage joint and

interagency reach-back capabilities for intelligence, logistical support, and information operations while protecting itself against information attacks. It will leverage space assets for communications; position, navigation, and timing; weather, terrain, and environmental monitoring; missile warning; and intelligence, surveillance, and reconnaissance. The Objective Force will provide for conventional overmatch and a greater degree of strategic responsiveness, mission versatility, and operational and tactical agility. With the Objective Force, the Army intends to deploy a combat-capable brigade anywhere in the world in 96 hours, a division in 120 hours, and five divisions in 30 days. Our ability to quickly put a brigade-size force on the ground, with the balance of a division following a day later, fills a current gap for credible, rapid deterrence. The Objective Force will offer real strategic options in a crisis and changes the strategic calculations of our potential adversaries. The Army with Objective Force capability will provide the National Command Authorities with a full range of strategic options for regional engagement, crisis response, and land force operations in support of the Nation.

SCIENCE AND TECHNOLOGY

Advances in science and technology will lead to significantly improved capabilities for the Objective Force. The Army is programming over \$8 billion for science and technology efforts to begin fielding the Objective Force by the end of the current decade. This effort seeks to resolve a number of challenges: how to balance sustained lethality and survivability against ease of deployability; how to reduce strategic lift requirements and logistical footprint required in-theater; how to mitigate risk to our support forces and to forces in-theater; and how to ensure digitized, secure communications to provide battlefield awareness at all levels of command. The Army will find the best possible answers while maintaining the ready, disciplined, and robust forces our Nation demands, our allies expect, and our adversaries fear.

Future Combat Systems (FCS), a system of systems, is one of the essential components for the Army's Objective Force. To accelerate development of key technologies, the Army partnered with the Defense Advanced Research Projects Agency in a collaborative effort for the design, development, and testing of FCS while simultaneously redesigning the force. The fiscal year 2002 budget funds FCS demonstrations of system-of-systems functions and cost sharing technologies. Forces equipped with FCS will network fires and maneuver in direct combat, deliver direct and indirect fires, perform intelligence, surveillance, and reconnaissance functions, and transport soldiers and materiel. Over the next 6 years, the Army will demonstrate and validate FCS functions and exploit high-payoff core technologies, including composite armor, active protection systems, multi-role (direct and indirect fire) cannons, compact kinetic energy missiles, hybrid electric propulsion, human engineering, and advanced electro-optic and infrared sensors.

Equally essential to the Objective Force, and consistent with Secretary Rumsfeld's strategic review, is the fielding of the Comanche helicopter beginning in 2006. The fiscal year 2002 budget continues our efforts toward achieving this important capability. Comanche is the central program of the Army aviation modernization plan and a prime example of existing modernization programs with significant value for Objective Force capability. Although Comanche will be fielded as part of the Objective Force, its digitization will be compatible with Legacy and Interim Force systems. Comanche will provide a lethal combination of reconnaissance and firepower.

INSTITUTIONAL TRANSFORMATION

The fiscal year 2002 budget funds schoolhouse training at 100 percent. This is a first. It funds U.S. Army Training and Doctrine Command (TRADOC) transformation initiatives to include expansion of one station unit training, establishment of a land warfare university, basic officer leadership course enhancements, establishment of an accession command, and quality assurance initiatives.

As the combat formations are being transformed, the Army's institutional base—schools, services, facilities, and installations—must also change to support both the Objective Force and current mission requirements. TRADOC produces tactically and technically proficient soldiers and leaders and the doctrine and concepts for operational success. The Army must train soldiers—in simulations, on ranges, and in exercises—and grow them into leaders who are capable of executing rapid and seamless transitions between missions throughout the spectrum of operations. Training must continuously improve and respond to emerging technologies. We must recapitalize and modernize ranges, distance learning centers, Army schools, and combat training centers to keep pace with changes in force structure, technology, and the global environment. We must address the increasing challenge to readiness posed

by encroachment to our ranges and training areas while maintaining our environmental stewardship of these same lands.

Army doctrine and concepts must also transform to keep pace with our changing operational force and growing technological advantages. As foundations for the Transformation, the two conceptual baselines for Army doctrine, Field Manuals, FM-1, *The Army*, and FM-3, *Operations*, were published June 14, 2001. TRADOC is revising and developing doctrine for organization and operation of the Interim Force and validating concepts for the Objective Force. We are also developing the concepts to integrate the capabilities of space and information operations to provide support across the entire spectrum of military operations. At every level, the Army is integrating emerging joint and multinational doctrine to develop the concepts that will field a force, grounded in doctrine, that is capable of providing the National Command Authorities a range of options for regional engagement, crisis response, and sustained land force operations.

ARMY TRAINING AND LEADER DEVELOPMENT

Key to transformation is the training and leader development necessary for producing adaptive soldiers and leaders who can lead and succeed in both joint and combined environments while capitalizing on the latest battlefield technologies. The Army Training and Leader Development Panel (ATLDP) has concluded its in-depth study of issues affecting the Army's culture and its training and leader development doctrine. The ATLDP surveyed and interviewed over 13,500 officers and spouses. Follow-on studies of the noncommissioned officer and warrant officer corps will be conducted over the next 6 months. The primary objectives of the panel were to identify skill sets required of Objective Force leaders and to assess the ability of current training and leader development systems to cultivate those skills. Study participants addressed issues that included well-being, job satisfaction, training standards, and the officer education system. This study represents a candid self-assessment by the Army; it seeks to restore faith with soldiers and set a course for improving all aspects of the Army's culture by bringing institutional beliefs and practices in line. To that end, some steps have already been taken, including adapting the officer education system to meet the needs of the transforming Army; eliminating non-mission compliance tasks that interfere with war fighting training; allocating full resources to our Combat Training Centers; and protecting weekends for the well-being of soldiers and their families. It is a testament to the strength of any organization when it is willing to take such a candid look at itself, and this kind of healthy introspection characterizes a true profession.

The fiscal year 2002 budget funds development of training, training products, and materials that support resident and unit training programs. It provides for the analysis, design, development, management, standardization of processes and practices integration and operations of Army training information systems and automation of the training development process. In the area of leader development it allows schoolhouse trainers to adapt training programs for future leaders and increases training support funding for aviation and specialized skill training. Further, the budget funds active component unit training OPTEMPO and supports critical training enablers. Our Combat Training Center program remains the proving ground for warfighting proficiency, and we currently have scheduled ten brigade rotations through the National Training Center, ten brigade rotations through the Joint Readiness Training Center, and five brigade rotations through the Combat Maneuver Training Center.

LOGISTICAL TRANSFORMATION

We will transform logistical services and facilities to enhance readiness and strategic responsiveness. Today, logistics comprises approximately 80 percent of the Army's strategic lift requirement, creating a daunting challenge to deployability. Prepositioning stocks and forward presence solves only part of the problem. Currently, the Army has seven brigade sets of equipment forward deployed on land and at sea with an eighth brigade set being deployed in fiscal year 2002. As we fundamentally reshape the way the Army is deployed and sustained, we will ensure logistics transformation is synchronized with the needs of the operational forces and supports Department of Defense and Joint logistics transformation goals. The Army is examining how to reduce the logistical footprint in the theater of operations and to reduce logistical costs without hindering warfighting capability and readiness. Approaches already being explored are recapitalization, common vehicle chassis design, a national maintenance program, and an intermediate basing strategy for force protection. We are synchronizing the critical systems of the institutional Army with

our operating forces to ensure the Transformation of the Army is holistic and complete.

CONCLUSION

The Army has embarked on a historic enterprise. Recognizing that the forces we can provide to the combatant commands are becoming obsolescent in a changing strategic environment, the Army is transforming. With the support of the administration and Congress, the Army has charted a course that will better align its capabilities with the international security environment, enhancing responsiveness and deterrence while sustaining dominance at every point on the spectrum of operations. The Army Transformation is the most comprehensive program of change in a century and is already underway. It comes at a propitious moment. We live in a time of relative peace. Our Nation's economic strength has given us a period of prosperity. A decade of post-Cold War experience has provided us strategic perspective and American technological power gives us tremendous potential. We have seized this opportunity to guarantee our strategic capability and our non-negotiable contract with the American people well into this century.

Mr. Chairman and distinguished members of the committee, we thank you once again for this opportunity to report to you today on the state of your Army. The statements made in this testimony are contingent upon the results of Secretary Rumsfeld's strategic review. We ask you to consider them in that light. We look forward to discussing these issues with you.

Chairman LEVIN. Thank you.
General.

STATEMENT OF GEN. ERIC K. SHINSEKI, USA, CHIEF OF STAFF, UNITED STATES ARMY

General SHINSEKI. Mr. Chairman, Senator Warner, distinguished members of the committee: Today more than 24,000 soldiers are operationally deployed around the world in 67 countries. These are not new statistics to you. This committee in particular gets out to see those soldiers. But I give you those numbers because it gives you an indication of where the Army is deployed today.

We remain a warfighting Army and our primary focus day to day attends to our warfighting prowess. But we also understand that we provide versatile and agile solutions for all the other challenges facing the United States. This explains in part our deployed profile, and in the absence of better alternatives we do not believe that we should leave the Nation without forces that can cover the full spectrum of demands that it confronts as a global leader day to day.

To meet these obligations, the fiscal year 2002 presidential budget amendment reflects a carefully balanced program that allows the Army to meet its readiness requirements in fiscal year 2002 while sustaining the other key elements of our vision—our people and the transformation of the force.

With tremendous bipartisan support from Congress, we have achieved sustainable momentum in transforming the Army. We are committed to making that momentum irreversible as we make the Army faster, more lethal and decisive, and more affordable. In the next 10 years, we must be prudent about accepting more operational risk than we are already carrying today without good analytical foundations for such additional burdening.

To date, we have moved out on our two interim brigade combat teams at Fort Lewis, Washington, and we are investing in science and technologies in ways that will enable us to begin research and development on those Science and Technology (S&T) initiatives in the 2003–2004 timeframe. Momentum here is good. In order to protect that momentum, our priority under the new budget is to ex-

tend the life of our Legacy Force systems through recapitalization and selective upgrades to our current warfighting platforms.

Today 75 percent of those combat systems exceed their expected half-life, increasing operations and maintenance costs by 30 percent over the past 4 years. Apache helicopter safety of flight messages alone have gone up by over 200 percent since 1995. To combat these spiraling costs, we have identified 19 systems that must be recapitalized in order to extend their useful readiness. We must also selectively modernize those capabilities with systems like Crusader and Comanche, which will cost-effectively maximize the capabilities of the Legacy Force and also answer Objective Force requirements.

We are grateful for this committee's devotion to improving the well being of our soldiers and their families. It is making a difference. These initiatives will begin to slow the rate of decay of our infrastructure, but not totally reverse it. We must protect the dollars we have elected to shift to these accounts and remain vigilant in fixing this problem.

Mr. Chairman, the Army Vision is about future American leadership at home and abroad. Decisive land power uniquely and critically counters international threats and defends U.S. interests, and when resistance is overcome, land power ultimately guarantees compliance with terms of peace. Thereafter, it enables the establishment of legitimate authorities and rebuilding in areas of conflict. In short, land power provides the National Command Authorities and the warfighting CINCs with the kind of flexibility to respond to and resolve crises.

Thank you for your invitation to appear here today. I look forward to your questions.

Chairman LEVIN. Thank you, General Shinseki.
Secretary England.

STATEMENT OF HON. GORDON R. ENGLAND, SECRETARY OF THE NAVY

Secretary ENGLAND. Chairman Levin and Senator Warner, members of the committee: I am delighted to be here. I am especially delighted to be here with Admiral Clark and General Jones. Hopefully, you will see us together much in the future because we have formed indeed, Senator Warner, a very, very close leadership team as we lead our forces into the future.

I do want to thank this committee for your support in the past and for your continuing support of our naval services. In fiscal year 2001 and particularly with the supplement provided, as a naval service we were able to meet our commitments, but with some unfulfilled needs. The submitted budget for fiscal year 2002 has the naval service getting better in all categories.

Senator Warner, we do maintain the momentum in 2002 with the budget we have submitted. It is still short of our end objective and you will be hearing more of that, I know, from the chiefs. We are looking to the 2003 budget submittal to reflect the ongoing studies and the future force structure.

Senator Levin, the CNO and the Commandant and I, in response to your comment earlier, do plan to include in the 2003 budget specific business practice improvements within the Department of the

Navy to make our organization far more efficient and effective. We do agree with Secretary Rumsfeld, we do believe 5 percent is certainly reasonable in terms of improved proficiency and efficiency and effectiveness, and you will see that reflected in our 2003 submittal to you.

So I do look forward to working with each of you as we address these challenges ahead. I thank you for this opportunity to appear before you, and I also look forward to your questions.

Thank you very much, sir.

[The prepared statement of Secretary England follows:]

PREPARED STATEMENT BY HON. GORDON R. ENGLAND

Mr. Chairman, members of the committee, good morning. Thank you for the opportunity to speak with you today. The CNO, Commandant and I are grateful for your continuing support to keep the Navy and Marine Corps the very best in the world.

Let me begin by saying the Navy and Marine Corps remain a strong and potent arm of our Nation's military forces. They have maintained a forward presence in all corners of the globe ready to perform any mission called for from humanitarian relief to interdiction operations. Able to deploy on short notice the Navy Marine Corps team provides the theater and regional commanders a well trained and effective fighting force.

In his remarks at the Naval Academy graduation, President Bush said, "We must build forces that draw upon the revolutionary advances in the technology of war that will allow us to keep the peace by redefining war on our terms—a force that is defined less by size and more by knowledge and swiftness . . . and that relies heavily on stealth, precision weaponry and information technologies." I am in full agreement with this challenge and, while naval forces inherently fit the President's vision, some modifications and alignments may be needed to meet these goals.

But such changes are best made with a full understanding of the uses to which Navy and Marine Corps units are being put today. For instance, forward deployed naval forces are present around the world and are central to assuring the availability of the sea lines through which international commerce and key resources such as oil flow. Also, as Theater Commanders in Chief develop their comprehensive Theater Engagement Plans (TEP) in support of the National Security Strategy and National Military Strategy, the Navy and Marine Corps play particularly important roles in TEP execution by virtue of their regular forward presence. Lastly, we know that naval forces are regularly called upon to execute combat tasking on short notice in distant parts of the world. From the time my predecessor testified before this committee on 10 February 2000, Navy or Marine forces have engaged in combat over the skies of Iraq, in humanitarian support in East Timor, South America and in Europe.

Looking forward, it is useful to note that for some time the sea services have undertaken an evolutionary shift from operations predominantly on the open seas to operations that include the littoral: an evolution that has underscored the requirement for improved data networking; tailored battle management systems and sensors; and innovative ideas for employing marines that are attuned to the difficult littoral environment—afloat and ashore. This shift in focus generates a need to look at our equipment across a broader mission range . . . such as time-critical strike, ballistic and cruise missile defense; littoral and deep water anti-submarine warfare; intelligence, surveillance, and reconnaissance; air and ground mobility; and expeditionary maneuver warfare.

We also recognize that we need to recapitalize our force—by that I mean building new platforms—for the future. For instance, even as the average age of our ships has been steadily increasing to its present average of 16 years—and trending upward for the next 5 or so years—our building rates have not been keeping pace. Likewise, the average age of Navy and Marine Corps aircraft is about 18 years . . . close to the age of those sailors and marines who maintain them. However, the shape of the Navy of the future may change, as we work to develop a new national military strategy that takes new threats and new opportunities into consideration. Here also building aircraft in sufficient numbers . . . ideally at economical orders of production . . . is called for.

We have precious few new programs to recapitalize our forces other than systems like DDG 51, F/A-18E/F, and the new carrier under construction, U.S.S. *Ronald Reagan*. In fact, projected replacement aircraft, such as the F/A-18 E/F and the

Joint Strike Fighter do not meet the entire need under current plans, as there are no replacements scheduled for the EA-6B, P-3, or E-2 aircraft and some of our helicopter fleet. New funding may be needed, but I also intend to identify some funding sources through process improvement.

Modernization of our current force is also an imperative because of the requirement to be able to prevail if called upon in the near term. Nonetheless, it is prudent to accept reasonable risk by some reduction of expenditure in these accounts in order to make available assets for recapitalization for the future.

With that backdrop, I intend to make the most of our Navy-Marine Corps team by focusing on four strategic areas: combat capability, people, technology, and business practices.

First, as this committee is well aware, the primary purpose of the Navy and Marine Corps is to deter, train for, and when necessary, fight and win our Nation's battles. In remaining faithful to this charge, combat capability, which includes readiness, must be our primary emphasis. In all our decision-making, we will ask the question, "Does this task, program, organization, or facility materially contribute to improving our combat capability?" Likewise we will recognize that what has worked in the past may not always succeed in the future. Therefore, the department will invest more in technical and doctrinal experimentation, and in new and different ways of accomplishing our mission. Let me emphasize, our mission is, and will remain, joint. We are committed to the concept "One Team, One Fight." Along with our sister services and allies, we will organize, equip and train to fight jointly, recognizing that forward deployed naval forces are integral to the combined efforts of all the armed services.

Second, my very highest priority is our men and women in uniform, their families and our civilian workforce. During my confirmation hearings, I commented that any capital asset purchased by the Department of the Navy has no value to the Nation until it is manned by highly motivated and trained people. Therefore, as we plan for the future, we need to first be sure that our personnel policies will provide us the people and skills we require for our future systems.

In this regard, emphasis needs to be placed on "Quality of Service"—achieving a higher quality workplace as well as a higher quality of life for our sailors, marines, active duty and reserve, and civilians and all of their families. The goal will be to create an environment where our men and women can excel at their chosen profession, unimpeded by factors that divert their attention from work and sap their morale. This includes state-of-the-art tools, cutting-edge training, competitive compensation and efficient health care, and an operational tempo that considers the individual, as well as the family. Fostering a positive working environment where young men and women believe they contribute meaningfully to their units will encourage them to want to stay and grow with our team. When people want to stay with a group, others will want to join that group. Retention is a great recruiting tool!

Third, the application of advanced technology is central to our Nation's military strength. I am concerned, however, that the application of technology in the military has for a generation lagged its commercial availability. This is a high priority in our combat systems, but also includes technology for training, testing and management systems. Technological advances are central to the priorities set forth by the President and Secretary of Defense as we shift from the 20th century force, to the more lethal and agile one of the 21st. Technology will emphasize networks of information and communications as well as improvements in sensors and weapons. Initiatives are on going to translate such concepts as the Navy's Netcentric Warfare and the Marine Corps Expeditionary Maneuver Warfare into reality. The Naval War College's Navy Warfare Development Command and Marine Corps Combat Development Command along with numerous Fleet Battle Experiments are but one example of the testing of new concepts, equipment, and doctrine in both the joint and naval environments.

But technology is changing fast, so care must be taken to plan for future advances by anticipating logical insertion points early in the design process. This preplanned improvement schedule combined with spiral design should allow for the delivery of increased combat capability over a shorter period of time. Also important, U.S. systems need to have designed into them conduits that allow our allies to participate to the best of their significant capabilities at increasing levels of complexity. It goes without saying that embarking on this technological transformation will necessitate we recruit, train, and retain bright and intelligent people to operate and maintain these systems.

Fourth, our management team should be more process-oriented, working on ways to improve "how we do business" rather than concentrating only on specific programs and products. To do that, we need to know where we are and to have clear

visibility of where we are going. Measures and metrics provide the tools to do so and as such, will be a key element of our process-oriented management strategy. Our cold war acquisition infrastructure and regulations have been described as a "voracious dinosaur consuming dollars which should be applied to the real mission." It is time to change. Borrowing applicable business practices from commercial industry is a logical step. While the Navy and Marine Corps will always need good leaders in their primary combat arms arena, the Department of Navy will also develop leaders with a better understanding of business strategies, cost control and rapid and flexible design.

The Department has embraced the use of teams for integrated product and process development. We intend also to focus on activity based costing to better understand the actual price we are paying for a platform or system, both for acquisition and equally importantly for support over the life of the system. These initiatives should help to free resources to recapitalize our operating forces, establish processes that leverage commercial capabilities, maintain excellence and attract and retain quality people.

The world has changed a great deal over the past decade. But one thing, has not changed: the Navy and Marine Corps needs to deter, train for, and when necessary fight and win our Nation's battles. As we steam into this new century, I am reminded that forward presence provides an essential benefit for our Nation. The Navy and Marine Corps, and in fact the entire U.S. military, contribute to a stable global environment allowing our economy and our citizens to prosper along with other nations and peoples throughout the world. The stabilizing benefits of American military strength are key to our National interests and the well being of the international community. The investment by our Nation in its military to underwrite this prosperity is, indeed quite modest.

I look forward to working with Congress, the Secretary of Defense, and our sister Services to meet the challenges in the next year and beyond. The changes and transformations I have discussed constitute a start at the beginning of the new century. Thank you for your time this morning and your continued support for our sailors, marines . . . active and Reserve . . . our civilians and their families.

The statements made in this testimony are contingent upon the results of Secretary Rumsfeld's strategic review. I ask that you consider them in that light.

Chairman LEVIN. Thank you, Secretary England.
Admiral Clark.

STATEMENT OF ADM. VERNON E. CLARK, USN, CHIEF OF NAVAL OPERATIONS

Admiral CLARK. Thank you, Chairman Levin, Senator Warner, and members of this committee. I thank you for the opportunity to appear before you today. I am grateful always for your consistently strong support of the men and women of our Navy.

This morning as I speak, 96 of our 316 ships are forward deployed, almost 50,000 of our sailors at the far reaches of the Earth. That is the cycle of deployment for our Navy. Every day, every year, it never stops and it has not for many years, thanks in large part to the support of this committee.

The young men and women who volunteer to serve in our Navy, they work hard, they make it work. We owe them a great deal. They are doing a magnificent job and you have much to be proud in their service.

We do this as part of the Navy-Marine Corps team. It is appropriate that I am sitting next to General Jones. But we also do it operating jointly with the Army and the Air Force, projecting sovereign American power on and from the sea, close to home and in the far corners of the globe. We are doing this today with a relatively small force, 41 percent fewer ships than we had 10 years ago.

Our Navy is not breaking under stress, but its operational elasticity has diminished significantly. We face serious fiscal challenges

due to the mismatch between mission requirements and resources. For too long we have deferred modernization and recapitalization of the force and paid for mission accomplishment by postponing maintenance and repair of our infrastructure. This trend now poses, in my opinion, a serious risk to our future.

We also are streamlining our organizations, and I want to refer to Secretary England's comment. It is important that we improve our analytical underpinning, our metrics on how we accurately determine our requirements in the future, to continue to improve readiness and to maximize investment effectiveness.

A major focus of our future follows Secretary England's emphasis on using better business practices throughout our Navy. I share his enthusiasm for this very important cause. We need to reform the way we do business in the Department.

Regarding current readiness, I am encouraged by the fiscal year 2002 amended defense budget. It makes substantial investments to move the readiness accounts toward required levels.

In previous appearances I have talked here about being at war for people. Certainly they are the key to mission accomplishment. The improvements in compensation that you have supported and in fact brought about—bonuses, pay table adjustments, retirement reforms, better medical care, and in fact the initiative to balance their out of pocket expenses in housing—they are having the desired impact. Recruiting is on track for 2001 and this is good news.

But more exciting to me is the substantial improvement that we are making in retention. The targeted pay raise and other initiatives in the 2002 budget amendment will reinforce these positive trends.

One word about quality of service. We have made substantial gains in our quality of life programs, with the support of Congress. Our quality of work programs require improvement, especially the infrastructure. Our Navy's shore structure is in poor condition. Our recapitalization cycle exceeds 160 years and my critical backlog is over \$2.75 billion. Our real property maintenance funding is significantly below private industry norms. I have spoken on this point on virtually every trip to the Hill and we continue to seek your support to change the way we think about this vital area.

Certainly the challenge of sustaining current readiness while investing in key future capabilities is a difficult balancing act. Following underinvestment in the decade of the nineties, we face an acquisition bow wave. It has been spoken about here before. We need nine ships and at least 180 airplanes a year to sustain the 1997 QDR level. I use that frame of reference because that is what we are targeted against until we arrive at a new strategy and force structure profile. But we are proceeding at significantly less than that and we cannot sustain the Navy that we have today with current funding levels, which will lead eventually to a Navy of somewhere around 230 ships.

I am very interested in innovative solutions to accelerate ship and aircraft procurement rates. To do this, I am convinced that we must find ways to more effectively partner with industry and level fund our annual investments in this type of construction.

Ensuring current readiness, modernizing our fleet, providing sailors with high quality of service, and transforming to meet fu-

ture needs—we also need these things to do this. This budget moves us in the right direction, but we need continued and increased investment. The challenges facing our Navy are significant, but with the help of this committee and Congress they can be overcome.

I again thank the committee for your continued support to our Navy, to our sailors, and to their families, and I look forward to answering your questions.

[The prepared statement of Admiral Clark follows:]

PREPARED STATEMENT BY ADM. VERNON E. CLARK, USN

Mr. Chairman and members of the committee, I appreciate this opportunity to appear before you. Your consistent support of Navy requirements and vision of a strong Navy for our Nation have protected the quality of life of our sailors and enhanced operational readiness during the past year. I am very grateful and I thank you.

THE UNITED STATES NAVY: ON WATCH FOR AMERICA'S SECURITY

The defense and prosperity of the United States has been tied to the seas since the founding of our Republic and the United States Navy has been the principal instrument of that security. Our Navy's history is one of international engagement in peacetime, effective response in crisis, and victory in conflict. It includes a rich tradition of innovation, adaptation, and courage in meeting regional and global threats that have confronted our Nation over the past two and a quarter centuries.

Today, on the threshold of this new century, we face emergent challenges that are adding complexity to the missions our Navy has traditionally accomplished, providing powerful impetus for change. Cyberwar, weapons of mass destruction (WMD), international terrorism, and the violence accompanying failed states—to name but some of these threats—do not replace the specter of state on state conflict. Rather they add to the danger, providing spark to already combustible situations.

To counter these challenges, we are investing in a 21st Century Navy of awesome capability: a Navy that is strategically, operationally, and tactically agile; technologically and organizationally innovative; networked at every level; highly joint; and effectively integrated with allies. It is a Navy that will remain at the leading edge of the joint and combined fight—forward deployed to enhance deterrence, react swiftly to crises, and triumph in war.

These attributes are critical because our Navy will operate in a volatile world of rapid change, more dangerous in some regards than when we faced the global strike and sea denial capabilities of the Soviet Union. This strategic environment will place a premium on freedom of access, and America will need the capabilities of the Navy/Marine Corps team operating from the maritime domain—free to move about the world, influencing events, representing our Nation's vital interests, and remaining ready to fight and win.

THE IMPORTANCE OF NAVAL FORCES

In 2002 and beyond, our Navy's posture, programs, and character will be shaped by the mission of projecting sovereign American power in support of national interests while forward-deployed to the far corners of the earth.

Such forward-deployed naval forces are central to the success of the National Military Strategy and integral to regional Commander in Chief (CINC) plans for peacetime and combat operations. A premier instrument of American power, your Navy operates around the globe, demonstrating command of the seas, ensuring the free flow of trade and resources, providing combat-ready presence, and assuring access for joint forces.

Our Navy is shaped to meet the national and regional requirement for forward forces. While some ships and squadrons are homeported overseas, most deploy rotationally for periods of up to 6 months in an 18–24 month cycle. This construct drives the Navy's force structure.

Fulfilling these important missions has become steadily more challenging. While the requirement for forward-deployed, combat-capable naval forces has remained constant since the end of the Cold War, assets available to meet that requirement have decreased markedly. Our force structure declined 41 percent since 1991, from 538 to 316 ships. Currently one-third of our ships are forward deployed every day compared to approximately one-fifth during the Cold War. Our Navy is a carefully

balanced force optimized to fill the global presence requirements of the Unified CINCs.

One of today's central defense issues relates to the continued relevancy of overseas forces. Since the end of the Cold War, the United States military has become a mostly CONUS-based force. We have withdrawn two thirds of our permanently stationed forces from Europe and are fulfilling Middle East presence requirements with rotational units. With the exception of Korea, Asian commitments are being covered by naval forces or flyaway units from the United States.

Emerging technologies have offset some of these overseas presence reductions, yet virtually all strategic planners remain committed to the importance of forward-deployed forces. They appreciate that regionally engaged, combat credible assets maximize our ability to dissuade potential adversaries, deter aggression, and quickly bring warfighting power to bear when needed. Operationally, such presence is fundamental to providing sustained precision fires and projecting defense overland to assure access for expeditionary joint forces.

Forward presence is not without risk, however, and we are committed to making the investments necessary to assure mission effectiveness in view of emergent threats. In short, we must remain ready to "climb into the ring" with our opponents—and not only the ring defined by us—and prevail.

THE CHALLENGE OF CURRENT READINESS

The standard by which we measure current readiness is the ability of naval forces to confidently meet the challenges of an uncertain world from the very first day of deployment. We will deploy and operate ready to conduct combat operations with maximum effectiveness and minimum risk.

Forward-deployed naval forces are prepared to do so. As reported first in the latter part of the 1990s, the readiness of deployed forces is being achieved more and more at the expense of the non-deployed segment of our force structure. Non-deployed forces are operating below satisfactory readiness levels, making it increasingly difficult to meet operational standards and deployment requirements. Analysis of fleet forces (figure 1) clearly illustrates the growing gap between deployed and non-deployed Navy units in overall readiness during the last two decades.

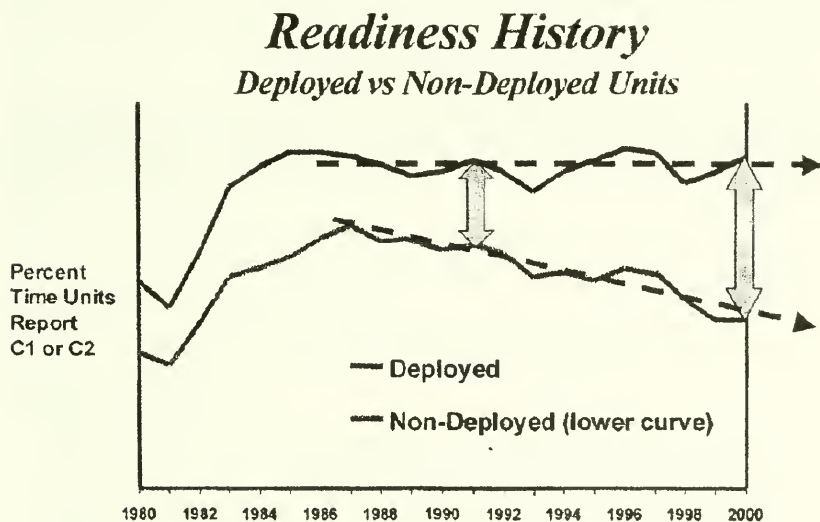


FIGURE 1

Many ships, including the *Austin* and *Anchorage*-class amphibious ships, as well as our fleet command ships, are reaching the end of their service lives. Such units often require unprogrammed repairs, forcing us to divert funds to meet urgent maintenance requirements. These actions, in turn, produce a maintenance backlog that is very unhealthy, especially given the size of our Navy today.

Another important fact is that ships reaching service mid-life, like the oldest of our Aegis cruisers, require modernization to be operationally viable in future hostile situations. Funds to complete this type of modernization have historically not competed successfully against other recapitalization requirements.

Naval aviation, in particular, poses profound challenges. Our aviation force now contains the oldest mix of type/model/series aircraft in naval history, yet it is our aircraft that are routinely employed in combat overseas. For the first time, our average aircraft age exceeds the average age of combatant ships, leading to a corresponding increase in the cost of operations and maintenance.

Global tasking has continually stressed our aviation force. As a result, the F/A-18 has been flown well in excess of planned utilization rates and more than 300 aircraft will require service life extensions earlier than planned or budgeted. Similar situations apply to F-14s, EA-6Bs, P-3Cs, SH-60s, and virtually every other aircraft in the fleet.

The single most influential factor in achieving near-term aviation readiness is the health of our Flying Hour Program, which includes fuel, consumable spare parts, and Aviation Depot Level Repairables (AVDLRs). The cost of AVDLRs has risen an average of 13.8 percent per year from fiscal year 1996-1999; the cost increases are driven principally by age. Despite attempts to alleviate shortages in AVDLRs, we continue to experience shortfalls. Shortages also exist in aviation mission critical items such as targeting pods and repair equipment on aircraft carriers.

The most effective manner in which to address the problems facing naval aviation is to introduce new aircraft into the fleet as soon as possible. Toward that end, the fiscal year 2002 amended budget takes steps to increase the number of F-18 E/F aircraft. We are currently in an age/cost spiral that can be best corrected by addressing these modernization requirements.

Current readiness shortfalls facing our ships and aircraft would be far worse were it not for aggressive action already taken. We reprogrammed nearly \$6.5 billion from other Navy programs to the current readiness portion of the Navy baseline program for fiscal year 2002-2007, shoring up the Flying Hour Program, Ship Depot Maintenance, Ship Operations, and Real Property Maintenance accounts. The fiscal year 2002 amended defense budget will have a further positive impact due to the substantial investment being made in bringing readiness accounts to required levels. This budget puts us on course to correct the under-investment in readiness.

THE IMPERATIVE OF FUTURE READINESS

The challenge of sustaining current readiness while investing in key future capabilities has been a most difficult balancing act. Current readiness has too often come at the expense of recapitalization and modernization. As a result, modernization efforts have not kept pace. Figure 2 shows the dramatic decline in authorized ships over the past five decades.

SHIPS UNDER CONSTRUCTION

Fiscal Years 1950-2002

WARFIGHTING AND DIRECT SUPPORT SHIPS UNDER CONSTRUCTION

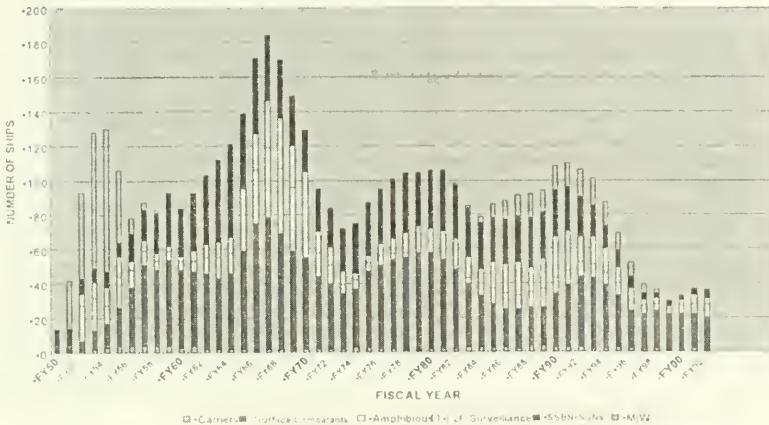


FIGURE 2

Due to the level of investment in procurement during the 1990s, we face a significant acquisition "bow wave" for ships and aircraft today. I am on the record in stating that the Navy needs about \$34 billion a year to meet procurement requirements—this is about \$10 billion per year more than funded at present. We must buy 180–210 aircraft and nine ships a year to sustain the 1997 QDR force level of 4,200 aircraft and 310 ships.

We are procuring significantly less than that. We will procure just six ships and 88 naval aircraft in fiscal year 2002. We cannot sustain the Navy we have today with current funding levels, which would lead to a 230 ship Navy over time.

The impact of the current low procurement rate goes beyond force levels. It adversely affects the stability of our unique defense industrial base. We are paying a premium in program cost today and realizing substantial cost growth because of production inefficiencies due to the lack of economies of scale. For the Navy, virtually every procurement program of record is proceeding at a sub-optimum economic order of quantity.

Still, we are making important investments in programs that will comprise the core capability of our forces in the coming decades. DD-21, CVNX, JSF, FA-18E/F, LPD-17 and the *Virginia*-class SSN present compelling technological leaps in warfighting capability and innovation.

The status of programs discussed below, as well as the associated funding levels, is subject to change as a result of the ongoing Quadrennial Defense Review. The Secretary of Defense will develop funding guidelines beyond fiscal year 2002 when that review is complete.

Program specifics include:

DD-21. The *Zumwalt*-class destroyer will provide sustained, distributed, and precise firepower at long ranges to support joint forces ashore by conducting precision attacks on land targets while simultaneously engaging threats above and below the sea. This program is central to our transformation effort, including the introduction of Integrated Power Systems (IPS), the Advanced Gun System (AGS), multi-function radar, and reduced manning concepts. Additionally, DD-21 is another step toward the creation of a more integrated Navy/Marine Corps team. DD-21 will provide significantly enhanced fire support for marines ashore. The fiscal year 2002 amended budget provides continued RDT&E investment pending final contractor down-select later this year.

CVNX. The fiscal year 2002 amended budget provides RDT&E and advance procurement for the first CVNX, which will replace U.S.S. *Enterprise*

in fiscal year 2013 and sustain essential carrier force levels. Principal design objectives for the CVNX class include a significant reduction of total ownership costs during the carrier's 50-year expected service life, reduced manning, and introduction of a flexible infrastructure that will facilitate the insertion of new warfighting capabilities as they evolve.

JSF. The Joint Strike Fighter program will field a family of tri-service, next-generation strike aircraft with an emphasis on commonality, providing sustainable U.S. and allied technological superiority at affordable prices. The fiscal year 2002 amended budget supports vigorous R&D investments required to procure the initial variant in fiscal year 2006.

LPD-17. We are not requesting additional LPD-17 class ships in the fiscal year 2002 budget, due in part to design and production challenges with the lead ship. We remain fully committed to the program, however, as it supports vital littoral warfighting requirements and promises relief from mounting costs of our aging amphibious ships. The 12 projected LPD-17s will replace four older classes of ships and serve as central elements of future Amphibious Ready Groups.

Virginia-class SSN. This class will sustain minimum essential attack submarine force levels as the *Los Angeles* (SSN-688)-class attack submarines leave the fleet. They are specifically designed for multi-mission littoral and regional operations as well as traditional open-ocean anti-submarine and anti-surface missions. Equally important, flexibility is designed into these ships to allow incorporation of new technologies. The fiscal year 2002 amended budget procures one submarine per year and continues RDT&E. This pace of procurement is not sufficient to maintain our required attack submarine force level over the long term.

F/A-18E/F. The F/A-18E/F will replace older F/A-18s and all F-14s. There is extensive commonality of weapons systems, avionics, and software between F/A-18 variants, and the infrastructure supporting the Super Hornet builds upon existing organizations. We strongly support the fiscal year 2002 amended budget's procurement increase from 39 to 48 aircraft to take advantage of economies of scale.

GROWING AND DEVELOPING SAILORS

Navy men and women are our most valuable resource and we must provide them with the tools and leadership to excel. We are and will continue to be in a "War for Talent" with other employers. To win this war, we are focusing on recruiting the right people, reducing attrition, and increasing reenlistments.

Improvements in compensation that you supported—bonuses, pay table adjustments, retirement reforms, and better medical benefits—are having the desired impact. The targeted pay raise and other initiatives in the Fiscal Year 2002 Budget Amendment will reinforce these positive trends.

The Navy met its overall recruiting and end-strength goals in fiscal year 1999 and 2000, and we are on track for fiscal year 2001. We are currently reenlisting nearly 60 percent of eligible Sailors who reach the end of their first enlistments, compared with 47 percent in 1999. Sixty-seven percent of petty officers with 6–10 years of service are reenlisting, compared with 60 percent 2 years ago. Annual attrition rates for first term Sailors have fallen from over 14 percent to less than 12 percent since 1998. Officer retention remains well below steady-state goals, however, in every community except Naval Flight Officers.

Better than anticipated manning in fiscal year 2001, the result of long sought after improvements in recruiting and retention, has reduced at-sea billet gaps and allowed our Navy to begin filling increased requirements in areas such as anti-terrorism/force protection, aviation maintenance, and environmental billets at sea. As a result, we are requesting authorization in fiscal year 2002 to increase our end-strength from 372,642 to 376,000. This additional end-strength will lock-in gains we have made in improved at-sea manning and enhanced readiness.

A major initiative aimed at further strengthening the professional development of Sailors is the Revolution in Training that is getting underway. This effort, which will unfold over the next 3 years, will leverage distance learning technologies, the improved Navy information exchange network, and a career-long training investment continuum to fully realize the learning potential of our professional force. This development is vital to the health of our manpower growth and development concepts of the 21st century.

Looking ahead, two personnel issues concern me. First is the erosion in Career Sea Pay, last updated in 1986. Redress of this problem was authorized in the Fiscal Year 2001 National Defense Authorization Act (NDAA) but not funded.

Second is the ITEMPO legislation contained in the fiscal year 2000 and 2001 NDAA's. Despite major progress made in mitigating time away from home for our Sailors, this legislation has the potential to significantly impact our force. Since October 2000, we have been collecting fleet data to evaluate the potential cost of this program. We will work closely with you in the months to come as the full impact of this legislation becomes clear.

QUALITY OF SERVICE: A CRITICAL RETENTION TOOL

A high Quality of Service—defined as a balanced combination of Quality of Life and Quality of Work—is directly related to retaining and motivating Sailors. While we have made gains in Quality of Life programs, our Quality of Work requires substantial improvement in many areas.

In previous testimony, I noted that a “psychology of deficiency”—the acceptance of sustained resource shortages as a normal condition—has become ingrained in our operating forces. It manifests itself in such things as substandard facilities and working environments. Over time, our people have not only become accustomed to poor facilities, many believe they will never improve.

Our Navy's shore infrastructure is in such condition because our recapitalization cycle exceeds 160 years, our critical backlog of maintenance and repair exceeds \$2.75 billion, and our RPM funding is significantly below the private industry average.

Meeting this challenge requires finding innovative ways to satisfy infrastructure needs. The fiscal year 2002 amended budget makes modest increases in RPM and military construction accounts that represent a start in bringing our shore facilities up to standard. There is much left to be done.

THE POWER OF ALIGNMENT

Navy-wide alignment is critical to ensuring our organizations, systems, and processes deliver a combat-capable Navy ready to sail in harm's way. To enhance communications and coordination, we reorganized the Navy Staff so that a Deputy CNO is focused exclusively on Fleet Readiness and Logistics, while another Deputy CNO is dedicated to Warfare Requirements and Programs.

In the fleets, we have taken action to consolidate leadership functions for naval aviation, surface, and subsurface forces. This will enable us to accomplish our missions in a better organized and more consistent manner around the world. Additionally, we are streamlining our requirements and readiness reporting process and amplifying the fleet voice in Washington decision-making, allowing us to more accurately determine requirements, improve readiness, and maximize investment effectiveness.

These actions are taken with the realization that we must, at every level, ensure our Navy is functioning as effectively and efficiently as possible. The Secretary of the Navy has made the incorporation of better business practices a major tenet of his plan of action. I share his enthusiasm for this cause. More accurate requirements forecasting, enhanced stability in program execution, greater efficiency in system design and production, and improved expenditure discipline in infrastructure maintenance and renewal all promise the taxpayer a fuller return on investment and our Navy a healthier future.

TRANSFORMING TO MEET 21ST CENTURY THREATS

Ensuring future readiness is not solely a matter of procurement. It also requires substantial investment in Science and Technology accounts to swiftly and effectively leverage emerging opportunities. Such agility will be key to the success of our conceptual shift from platform-centric warfare to an emphasis on networked, distributed systems.

For the Navy, transformation is about achieving greater warfighting capability per unit delivered to the CINC (Battle Group/Amphibious Ready Group/Ship/Aircraft/ Submarine.) We are transforming in two ways: by gaining capability through investment in critical technologies and by experimenting with the application of those technologies in an operational environment.

Enhanced capability will be achieved via prioritized investments focusing on networks, sensors, weapons and platforms. Examples of Navy investments key to the success of netted warfare include Information Technology for the 21st Century (IT-21), Navy-Marine Corps Intranet, Cooperative Engagement Capability (CEC), F/A-18E/F Shared Reconnaissance Pod (SHARP), Advanced Targeting Forward Looking Infra-Red targeting pod (ATFLIR), Naval Fires Network, Unmanned Airborne Vehicles (UAVs), Unmanned Combat Air Vehicles (UCAVs), Unmanned Undersea Vehicles (UUVs), Advanced Electronically Scanned Array (AESA) Radar, E-2C Radar

Modernization Program (RMP), Acoustic Rapid COTS Insertion (ARCI), Link-16, and Multi-function Information Distribution System (MIDS) data links.

Also key to transforming the fleet to meet 21st century threats is our serious commitment to fleet experimentation, spearheaded by the Navy Warfare Development Command in Newport, Rhode Island. Our ongoing series of Fleet Battle Experiments, working hand-in-hand with U.S. Joint Forces Command's experimentation efforts, holds great promise for doctrinal and programmatic development.

The result of these efforts will be a fleet that enhances conventional and WMD deterrence, assures access, conducts precision strike, gathers real-time intelligence, exercises joint command and control, and exploits the priceless advantages of sea control. In short, it will be a transformed Navy that continues its time-honored service, on watch for America's security.

CONCLUSION

I thank the committee for your continued strong support of our Navy, our sailors, and their families. Working together, I am confident that we can meet the challenges of current and future readiness, allowing the United States Navy to fulfill the missions fundamental to a more stable and peaceful world.

Chairman LEVIN. Admiral Clark, thank you very much.
General Jones.

STATEMENT OF GEN. JAMES L. JONES, JR., USMC, COMMANDANT OF THE MARINE CORPS

General JONES. Mr. Chairman, members of the committee: Thank you very much for your kind thoughts and words with regard to the families of marines who lost their lives and were injured in the accident last night at New River, North Carolina. Mr. Chairman, you correctly captured the sentiment with regard to the dangerous missions that we entrust to our men and women in uniform, and I will convey your words to their families and to the Corps. Thank you, sir.

I would like to add parenthetically, although under the backdrop of this tragedy, that I am pleased to report that thus far this fiscal year is the safest recorded year for flight mishaps in recorded Marine Corps aviation history, despite the accident.

With regard to the 2002 budget and the 2001 supplemental that is before you, many good things were done for our marines and their families. Quality of life enhancements, pay and entitlement, health, flying hours, military construction, force protection issues, all received great attention and we are profoundly grateful for this assistance.

I am happy to report to you, Mr. Chairman, that the Marine Corps is today a very stable culture. The proof of that is in its recruiting successes and its retention efforts across the board. Officer, staff, NCO, enlisted, 62 percent of the Marine Corps budget is now consumed by manpower accounts, pay, entitlements, health care and the like. This is good.

It also underscores what is not being done; despite the fixes that we have made in readiness, and they have been substantial, we are still going to continue to pay for it out of deferred modernization and out of inattention to our infrastructure recapitalization, which critically needs urgent attention.

I have said before that the Marine Corps is expeditionary by culture and transformational by design. I say that because words are important. I would like to talk very briefly about two sets of words. The first one is the words "expeditionary" versus "deployability." When you talk about expeditionary requirements for the Nation,

you are talking about investment in speed, and speed is expensive. Speed may get you there quickly, but it will not do you any good if it is not logistically sustainable.

So we talk about being able to get to different spots on the globe quickly. I just would like to underscore the fact that if you cannot sustain them once they are there it is not a good investment.

Simply put, too much speed may not be logistically sustainable. Put another way, the Nation does not need all of its forces to get to spot X or Y on the globe at the same time, nor can we afford it or lift it.

In 1973 we had an energy crisis and we pledged, or at least it was attempted to pledge, that we would not be held hostage to fossil fuels for our automobile industry, and we directed and pledged ourselves to transformational processes whereby our cars would become electric or solar-powered. Well, 27 or 28 years later, what we really did was modernize. We developed fuel efficiencies, better, lighter cars, safer cars, though we are still essentially dependent on fossil fuels.

So you may have transformational goals, but you may wind up simply modernizing. So that is the second set of words that I would mention. Transformation versus modernization needs to be considered, how much of one you need in relation to the other.

You should consider transformation and modernization and expeditionary capabilities versus simply deployable needs in relation to how we use our forces. Since the end of World War II we have deployed forces in response to burgeoning crises over 300 times, we have actually mobilized follow-on forces six times, and we have committed forces to major theater conflicts three times. So the power of our engagement strategies, which are not dependent on speed, but dependent on location and being engaged and being present and shaping the environment and doing things that are very important for our Nation and our alliances, is very important.

So we need both transformation and modernization, but perhaps not in the same amounts. We are likely to need more modernization than transformation since transformation is sometimes dependent on science and physics and programs that may or may not come to pass.

The Marine Corps' transformation and modernization programs are designed and on the books today to result in a convergence path that will start coming to fruition in 2008. As an example, I consider transformational programs for the Marine Corps to include the V-22, the Joint Strike Fighter, the AAV, integrated logistics concepts which will revolutionize the way we support our forward-deployed and based forces, information operations, and naval precision fires.

As an example of the modernization process, I consider the Lightweight 155, the LCAC, Landing Cushion Aircraft, SLEP program, the acquisition of HIMARS, the AH-1T modernization, the 120-millimeter mortar program, the M-4 service rifle, and the Joint Tactical Radio, and the KC-130J to be examples of needed modernization programs.

I believe that the American citizen of the future generation expects that we will be the dominant Nation of influence, so-called superpower, 50 years from now. I believe we can do this if we un-

derstand that the purpose of our investment in peacetime is so we do not have to fight wars, and the way we used our forces in the last 50 years suggests persuasively that we are successful at doing this.

We understand that national security is not an independent investment and that such an investment is the anchor that allows our Nation to be the Nation of global influence economically, politically, diplomatically, culturally, scientifically and technologically.

It is abundantly clear in my judgment that approximately 2.9 percent of our gross domestic product towards this goal is insufficient. Whatever Congress decides the investment is, I recommend that it be proportional and sustained over a gradual period of time. I am truly excited by the prospect of working with the Secretary of Defense, our Secretary of the Navy, the DOD and senior military leaders to adopt better business practices, which are critically needed, and much-needed acquisition reforms. The Marine Corps is proud to be the largest activity-based costing management program in the Department of Defense currently.

Our budget request, designed with both transformation and modernization in mind, balances the requirement for expeditionary forces with that for simply deployable forces. It has its convergence in 2008 and we can do that by sustaining and supporting the programs that are currently a matter of record. This is inclusive of base housing and modernization and recapitalization of our infrastructure.

We have a path to success. We continue to develop our foundational needs, such as the acquisition of Blount Island, which in my judgment should be done by 2004—it is a national asset and it is a national logistics gateway; enhancing and achieving a 3.0 Marine Expeditionary Brigade lift capability, due to the predictable paucity of land-based operational support bases in the 21st century. We should look at maritime prepositioned ships of the future, to explore rapid sealift.

I would also caution that we pay a lot of attention to the rise of encroachment issues, which are going to face all of us in the foreseeable future.

The Secretary of Defense has said we should only replace things if we have something better to replace them with. I understand that, I agree with it, and we are already moving in that direction.

The rapidly deployable force with staying power that some has said is nonexistent in the military today in fact does exist and it is the Marine Expeditionary Brigade. It is both expeditionary and it is deployable. It is being modernized and will be transformed in part, maybe in whole, between now and 2008, and it exists today for the joint warfighter. It possesses forcible entry capability, it is affordable, it is scalable, it is forward-based or deployed, it is sustainable, it is joint and interoperable, and it is combined arms-capable, which is a goal that all true joint forces in the future must seek to achieve.

A final thought, Mr. Chairman. It is an exciting time to be a United States Marine. We look forward to our future while learning from the past, and we look forward to your questions. Thank you, sir.

[The prepared statement of General Jones follows:]

PREPARED STATEMENT BY GEN. JAMES L. JONES, JR., USMC

Chairman Levin, Senator Warner, distinguished members of the committee; it is my pleasure to report to you on the state of your Marine Corps. On behalf of all marines and their families, I want to thank the committee for its continued support. Your efforts to increase compensation and improve the quality of life of our young men and women in uniform have been central to the health of your Marine Corps and are deeply appreciated.

VISION

I believe the committee is well familiar with the nature of the present international security landscape and the current state of our forces, so I will begin simply by noting some of the ways in which warfare has changed in the 21st century. In the 20th century, mass and volume were the primary methods relied upon to win wars. In their place, speed, stealth, precision, and sustainment have become the emergent principles of modern warfare.

These four principles have application from the strategic to the tactical levels. Furthermore, they are key with regard to how our forces maneuver and employ weapons as well as to how they exchange information and logistically sustain themselves. The Marine Corps' vision, accordingly, is to inculcate these principles into our doctrine, organization, training, equipment, and support. One indication of our commitment to do this, reflected in *Marine Corps Strategy 21*, is our concerted aim to enhance the strategic agility, operational reach, and tactical flexibility of our Marine Air-Ground Task Forces. Speed, stealth, precision, and sustainment are integral to each of these capabilities.

Indeed, we are revolutionizing our approach to operations with these 21st century principles of war in mind. We are moving beyond the traditional amphibious assault operations which we conducted in the 20th century. Our goal now is advanced, expeditionary operations from land and sea to both deter and respond to crises.

The Corps has been our Nation's premier expeditionary force since our landing at Nassau in the Bahamas, 225 years ago. Today, we have worldwide responsiveness and the versatility to undertake missions across the spectrum of operations. To marines, the term "expeditionary" connotes more than a given capability. For us, it is a cultural mindset that conditions our marines to be able to rapidly deploy with little advance warning and effectively operate with organic logistical support in austere environments. This is the basis of the Marine Corps' culture as well as an acknowledgement of the necessity to do more with less and to be prepared to fight and win with only the resources we bring with us, without the need to return to fixed bases for refitting or retraining.

A prime example of these attributes is resident within our medium weight Marine Expeditionary Brigade (MEB). Nearly 10 years ago, in light of pressing manpower considerations, we deactivated our six standing brigade command elements. Last year, we reestablished three Marine Expeditionary Brigades by embedding their staffs within our Marine Expeditionary Force headquarters. These units are now actively operating. The 1st MEB recently participated in operation NATIVE FURY, a humanitarian assistance mission in Kenya; 2d MEB has been integrated into contingency plans for Europe and Latin America; and, 3d MEB has conducted a maritime prepositioning shipping offload in Australia.

The versatility of the MEB is emblematic of the unique scalability of our Marine Air-Ground Task Forces. In size and capability, these brigades are midway between our Marine Expeditionary Units and our Marine Expeditionary Forces. Furthermore, our MEBs can either deploy on amphibious shipping or be airlifted into a theater of operations and join up with Maritime Prepositioning Forces.

A special characteristic of our Marine Air-Ground Task Forces is that they consist of five integrated elements: command; ground combat; aviation; logistics; and, supporting establishment. The MEB consists of a regimental landing team, with organic infantry, artillery, and armor elements, and in addition to a composite aircraft group with both fixed-wing and rotary-wing aircraft, it also has a combat service support group—whose supplies can sustain the MEB in full scale combat for 30 days. Each of these elements reinforces the others. This teamwork, built on training and experience, reaches across every battlefield function, creating a unique degree of synergy that distinguishes our units from others.

Ultimately, our vision of the future and our expeditionary culture, along with our philosophy of maneuver warfare, come together in our emerging capstone concept, *Expeditionary Maneuver Warfare*. Achieving the full promise of that concept will hinge on our efforts to balance the competing demands of near-term readiness and investment in equipment modernization and infrastructure. This is no small task.

These over-arching concerns are interrelated and in the long-term we cannot have one without the others.

In order to improve our near-term readiness, we have made significant internal adjustments over the past 2 years. Through reduction in attrition of our first term marines, internal management efficiencies, outsourcing, and privatization, we will eventually return approximately 4,000 marines to the operating forces. We are also utilizing numerous best business practices to make our operations both efficient and effective and now have the largest Activity-Based Costing/Management program in the Department of Defense, if not all of government. While these efforts have improved the efficient application of fiscal and manpower resources, and directly supported our commitment to personnel readiness in the operating forces, we are still assessing the totality of our personnel requirement. Should a need for additional personnel be determined, we are confident that commensurate funding and our continued recruiting and retention successes will support any required increase.

Despite such efficiencies, we are, regrettably, continuing to maintain our near-term readiness at the expense of our modernization. During the past decade, the Nation has consistently limited the resources dedicated to its national security. Consequently, the dramatic increases in operational requirements coupled with imposed constraints have mandated a substantively reduced rate of investment in equipment modernization and infrastructure. We are, in fact, at a point where we can no longer fail to rectify these shortfalls. As a nation with global responsibilities, we cannot ignore the critical importance of readiness.

The fiscal year 2002 budget submitted by the President proposes increased funding for military pay and entitlements, health care benefits, flying hours, base and station utilities, depot maintenance, strategic lift, essential base operating support costs, and force protection requirements. The administration also provided increased funding for one of our most underfunded areas—our infrastructure. Additional funds provided in this budget will allow us to begin to address badly needed family housing requirements at Camp Pendleton, California, and bachelor enlisted quarters at various locations. These are of great importance to our readiness. Nevertheless, I remain concerned about the level of investment in our infrastructure and equipment modernization. For example, the fiscal year 2002 budget does not include increases for ground equipment modernization.

READINESS

We assess our readiness in terms of “four pillars:” marines and their families; our infrastructure; our legacy equipment systems; and, our transformation and modernization efforts. Each of these pillars requires attention and resources in order to ensure your Corps is prepared to serve our Nation’s interests. I will discuss each of the pillars and comment on what we are currently doing and what we want to do with the support of this committee, beginning with the most important part of the Marine Corps, its people.

Our Marines and Their Families

The Marine Corps has three major goals: making America’s marines; winning our Nation’s battles; and, creating quality citizens. The fact that people are the focus of two of these three goals exemplifies the extent to which we recognize the special trust and confidence that the Nation reposes in us for the care and welfare of the young men and women in our charge.

Safety is central to the Corps’ focus on people and it is a critical component of maintaining our readiness. It is also a vital element of the quality of life that we provide our marines and their families. Along these lines, I am pleased to report that we have significantly lowered our off-duty mishap rates. Moreover, we have had notable success in aviation safety: our Class “A” flight mishap rate is the lowest it has ever been at this point in the fiscal year. For these trends to continue, it will take our unrelenting attention and we are dedicated to maintaining our focus on this important issue.

One factor contributing to our safety challenge is that we are a young force. The average age of our marines is 23, roughly 7 to 9 years younger than the average age of the members of the other services. This is part of the culture of the Corps inasmuch as our unique force structure results in 68 percent of our marines being on their first enlistment at any one time. The nature of our force structure requires us to annually recruit 39,000 men and women into our enlisted ranks. To fill this tremendous demand, our recruiters work tirelessly and have consistently met our accession goals in quality and quantity for 6 consecutive years as of the end of June 2001.

Retention is as important as recruiting. We are proud that we are meeting our retention goals across nearly all military occupational specialties. Intangibles—such

as the desire to serve the Nation, to belong to a cohesive organization, and to experience leadership responsibilities through service in the Corps—are a large part of the reason we can retain the remarkable men and women who choose to remain on Active Duty. Concrete evidence of this phenomena is seen in our deployed units, which continually record the highest reenlistment rates in the Corps. The Selective Reenlistment Bonus Program (SRB) has been an additional, powerful tool to meet our retention goals. The increases for the SRB Program as well as the targeted pay raise initiative found in the President's budget will go a long way toward assisting in meeting our retention goals and helping take care of our marines and their families. Retention success is also partly a consequence of the investment we make in supporting our operational forces—to give our marines what they need to do their jobs in the field when they are deployed—as well as the funds we earmark for educating and training our marines.

While we recruit marines, we retain families. As noted earlier, the effectiveness of our marines is dependent, in large measure, on the support they receive from their loved ones. Our families are indeed vital to our readiness. Increased pay as well as improved housing and health care directly influence our families' quality of life and, in turn, bolster the readiness of our units. Your support of our families' quality of life has contributed greatly to our retention success. However, the rising costs of rent, utilities, and fuel require continued annual increases in pay and Basic Allowance for Housing. Furthermore, we need to provide and maintain those essential support systems that benefit and protect marines and their families, especially accessible and responsive health care. We are extremely thankful, Mr. Chairman, for the recent enactment of much-needed improvements to the TRICARE system for our Active Duty personnel and for our retired veterans. The President's budget includes further improvements in this area which we expect to make a significant difference in retention, morale, and readiness.

Our Infrastructure

Beyond providing for our families, your support in allocating and sustaining resources for our bases and stations has had a profound impact on our readiness. Bases and stations are the launching pads and recovery platforms for our deployed units and thus are integral parts of our operating forces. Hence, we want to ensure that our posts possess the infrastructure and ranges necessary to prepare our marines for the wide variety of contingencies they can expect to confront. Equally important, they are sanctuaries for many of our families. Moreover, just as our bases and stations are vital to our current readiness, the recapitalization of our infrastructure is as important to our warfighting strength in the future as is modernization.

Thirty-five percent of our infrastructure is over 50 years old. Our supporting infrastructure—water and sewage systems, bridges, and roads—is antiquated and decaying. Though we slowed the growth of backlog of maintenance and repair (BMAR) at our bases and stations to approximately \$650 million this fiscal year, it rises to \$687 million in fiscal year 2002 and averages approximately \$660 million across the remainder of the Future Years Defense Plan—far exceeding the goal of \$106 million set for fiscal year 2010.

Although the increases provided in the President's budget begin to address this problem, I remain concerned. Prior to this budget, our military construction replacement cycle exceeded 100 years compared to a commercial industry standard of approximately 50 years. While this budget allows us to attain an approximately 60 year cycle of military construction replacement in fiscal year 2002, the average recapitalization rate remains nearly 100 years across the balance of the Future Years Defense Plan.

In more specific terms, approximately half of our family housing units are inadequate, and we have a shortage of nearly 9,000 homes in fiscal year 2001. The budget submitted by the administration allows us to revitalize our current inventory and to accelerate the eradication of substandard housing which is our first priority in this regard. Additional funding for both base-housing construction and the elimination of out-of-pocket housing costs for marines that live off-base will allow us to reduce our family housing deficit by 20 percent within 4 years.

On a separate note concerning our infrastructure, we are increasingly finding that many forms of encroachment upon our bases and stations threaten to degrade our readiness. When most of our bases and stations were established, they were distant from civilian population centers. Today, population growth and commercial development have not merely reached our installations, they have enveloped them. There are two major ramifications of this phenomenon. The first is that our bases and stations often are the last remaining wilderness zones in otherwise over-developed areas—which has meant that we have to balance our training requirements with our increasing responsibilities as environmental stewards. The second consequence

is that we are now obliged to routinely deal with a wide variety of complaints, mostly regarding noise or flight patterns, from those citizens who have chosen to live in close proximity to our bases and stations.

Such concerns about sea, land, and airspace utilization have necessitated close coordination and frequent compromise with many elements of the civilian sector. Accordingly, we work diligently to be good neighbors and try to accommodate the demands of environmental protection and concerns of adjoining communities without degrading training and the mission effectiveness of our marines. Despite this focus, encroachment issues have the potential to increasingly affect readiness in the years ahead. We need your continued support to ensure that the growing complexity and expense of encroachment issues do not hamstring our efforts to conduct meaningful training in order to provide for national security.

Our Legacy Equipment Systems

Our present and future readiness does not rest solely on the investments we make in our personnel and infrastructure. We also must consider the equipment we give our marines. This is no simple task. We must apportion our allotted resources between maintaining the ability to respond to crises and the requirement to lay the foundation for our capacity to respond to the security challenges of the future.

As a consequence of the procurement pause of the 1990s, many of our weapons, vehicles, aircraft, and support systems are approaching or have already reached block obsolescence. In the last decade, we have watched the size of our forces decline while the number of contingencies has increased. Under these circumstances, our equipment has been put under tremendous stress. We are devoting ever-increasing amounts of time conducting preventive and corrective maintenance as well as spending more and more money on spare parts to repair our legacy equipment. The limited availability of spare parts has put additional strain on these efforts. Our procurement programs seek to address this concern, but we are acutely aware that the acquisition process is often a slow enterprise. As a result, our legacy equipment systems and our efforts to maintain them will remain central to the readiness of our Marine Air-Ground Task Forces until our modernization programs replace those aging pieces of equipment.

This situation is particularly acute in our aviation combat element. In fact, the majority of our primary rotary-wing airframes are over 25 years old and in turn they are older than many of the marines who fly aboard them. Another illustration of the advanced age of our airframes is that our KC-130Fs are 19 years past planned retirement. When our first KC-130F rolled off the assembly line, President Kennedy was beginning his first year as the commander in chief. Likewise, our CH-46Es and CH-53Ds are more than 30 years old, and the average age of our CH-53Es is 12 years. Some of our younger pilots are flying the same aircraft that their fathers flew.

The challenges associated with the failure of parts on older aircraft, diminishing manufacturing sources, and long delays in parts delivery all place demands on readiness. Since 1995, the direct maintenance man-hours per hour of flight has increased by 16 percent and our "cannibalization" rate has increased by 24 percent. During the same time period, the full mission capable rate, though still within acceptable parameters, decreased by almost 17 percent across the force. While recent increases provided by the administration for Program Related Engineering and Program Related Logistics (PRE/PRL) are extremely helpful, modernization will ultimately relieve the strain being placed on these older airframes, as it will do for our ground combat and combat service support elements as well.

TRANSFORMATION AND MODERNIZATION

We recognize that we cannot know for certain what missions and threats we will face in the future, and that, as a result, we need to focus our efforts in such a way as to provide America with weapons platforms that are flexible and robust enough to allow her marines to excel across the wide spectrum of tasks and environments that they may encounter. The Corps' efforts to enhance its capabilities can be broadly described in terms of transformation and modernization. On one hand, transformation programs are intended to achieve fundamental advances in capabilities by exploiting leap-ahead technologies. On the other hand, modernization programs represent more modest efforts to yield incremental improvements to our equipment systems. Examples of the transformational programs that the Marine Corps is pursuing are the Advanced Amphibious Assault Vehicle, V-22 Osprey, Joint Strike Fighter, Naval Precision Fires, and Integrated Logistics Capabilities. Key modernization programs include the KC-130J, Lightweight 155mm Howitzer, High Mobility Artillery Rocket System, Medium Tactical Vehicle Replacement, and amphibious shipping.

Transformational Programs

Advanced Amphibious Assault Vehicle. The award winning Advanced Amphibious Assault Vehicle program is the Corps' highest ground acquisition priority and promises to allow high-speed surface maneuver from ship-to-shore as well as on land. Importantly, these vehicles will be able to deploy to their objectives from over the visual horizon, which will allow our ships to remain beyond the range of many threat weapons and surveillance systems. This capability will help negate an enemy's anti-access strategies and enable expeditionary operations from the sea.

V-22 Osprey. The Osprey remains the Corps' premier near-term aviation acquisition priority. Tiltrotor technology promises to revolutionize aviation and the V-22 will radically increase our strategic airlift, operational reach, and tactical flexibility. The Osprey's superior range, speed, and payload will allow us to accomplish combat missions and other operations from distances previously unattainable and at faster response times than possible with other airframes.

We are acutely aware of the challenges associated with the Osprey but are gratified that the Review Panel, appointed by then-Secretary of Defense William Cohen, concluded that tiltrotor technology is mature and that the V-22 promises to become a true national asset. Though the panel also determined the aircraft's reliability and maintainability must be improved, it noted that the V-22 will provide the Marine Corps with capabilities that cannot be provided by any single helicopter or conventional aircraft. Indeed, the Panel's conclusions mirror those of seven major cost and operational effectiveness analyses and the fact that the tiltrotor XV-15 has been flying since 1977.

We are presently in the process of ensuring that the V-22 is reliable, operationally suitable, and affordable—just as we did 40 years ago with each of the aircraft the Osprey is intended to replace. Currently, 85 reliability and maintainability improvements have been incorporated, or are on contract for incorporation, on the Osprey's production line—out of the 120 identified. With time, diligence, the close cooperation of our partners in industry, and with the support of Congress, we can work through the present challenges confronting us and achieve the tremendous operational capabilities offered by this remarkable aircraft. We are hopeful that the program's needed changes and improvements will be funded at the most economical rate of production in the fiscal year 2003 budget.

As has always been the case, our actions will be guided by an unyielding commitment to do what is right for our marines, their families, and our Nation. In asking for your support, I assure you that we will not compromise our integrity or jeopardize the safety of our marines for any program.

Joint Strike Fighter. Another aviation transformational effort of great importance is the Joint Strike Fighter. The Joint Strike Fighter is, first and foremost, a product of Congressional guidance from the 1980s. At the time, each service routinely produced a large number of different, service-specific airframes. Congress, therefore, asked the Department of Defense and industry to develop airframes that could be used more commonly by each of the services. The Joint Strike Fighter is the first step in that direction. The Short Takeoff and Vertical Landing variant promises to combine the current basing flexibility of the AV-8 Harrier with the multi-role capabilities, speed, and maneuverability of the F/A-18 Hornet and will fulfill both the Marine Corps' air-to-ground and air-to-air mission requirements. It will also incorporate both stealth and standoff precision guided weapon technology. Just as the Joint Strike Fighter has transformational operational potential, it also holds remarkable promise for our industrial base and our Nation's economy. Considering the fact that many of our allies have expressed interest in becoming partners in the program, this aircraft has the potential to bolster our defense industrial base to a degree similar to that achieved by the F-16 Fighting Falcon over the past 25 years. There is no other tactical aviation program with so much potential for satisfying national and international requirements in the first half of this century. The JSF program preserves our leadership role on the global stage in tactical aviation.

Naval Precision Fires. Marine Corps expeditionary capabilities are intrinsically linked to those of our partners, the U.S. Navy. One illustration of this, among many, is that naval precision fires are an essential dimension of our power projection capabilities. Yet, today the available resources for naval fire support are inadequate. Efforts to upgrade current naval surface fires capabilities are focused on modifications to the existing Mark 45 gun mount as well as the development of an advanced gun system, extended range guided munitions, and the Land Attack Standard Missile. Taken together, these planned enhancements will dramatically improve the range, responsiveness, accuracy, and lethality of the naval surface fire support provided to forces ashore.

Integrated Logistics Capabilities. We are also pioneering Integrated Logistics Capabilities to transform our combat service support. In this effort, we are analyzing

with the help of academia the manner in which military logistics can be altered to make our supply chain more responsive and better integrated with the operating forces. Tangible savings have already been realized by consolidating selected unit supply responsibilities at the retail level and we are looking to further reengineer our methodologies. With the use of new technologies and practices, proven in the private sector, the Corps will, in essence, create a "new order" for its logistics enterprise and undertake the revolutionary changes necessary to ensure that it continues to be the premier fighting force in the world.

Modernization Programs

KC-130J. Replacement of our aging KC-130 fleet with KC-130J aircraft is necessary to ensure the viability and deployability of Marine Corps Tactical Air and Assault Support well into the 21st century. The KC-130J's performance features include increased cruise airspeed, night vision compatible interior and exterior lighting, enhanced rapid ground refueling capability, digital avionics, and powerful propulsion systems. These strengths promise lower life-cycle expenses and eliminate the need for costly KC-130F/R Service Life Extension Programs. With the KC-130J, our aerial refueling fleet will be ready to support the tremendous increase in capabilities that the Osprey and the Joint Strike Fighter promise to provide for our Marine Air-Ground Task Forces.

Lightweight 155mm Howitzer. A number of ground weapon system programs are also of great interest to us. The Lightweight 155mm Howitzer is our first priority in this regard. The Lightweight 155 is a joint Marine-Army program that meets or exceeds all the requirements of the current M198 Howitzer while reducing the weight of an individual artillery piece from 16,000 to 9,000 pounds. This lower weight allows for tactical lift by both the CH-53E Sea Stallion helicopter and the V-22. Moreover, the digitization of this platform will greatly reduce response time and increase accuracy. I am pleased to note that the four minor technical discrepancies—concerning the spade, spade latch, recoil dampener, and optical sight—identified by the General Accounting Office have each been corrected. The first Engineering Manufacturing Development guns have passed all contractor testing and been accepted by the Department of Defense for subsequent evaluation. A production decision should be reached in September of next year.

High Mobility Artillery Rocket System. Also integral to our plans to improve our fire support is the acquisition of the High Mobility Artillery Rocket System (HIMARS). This system is designed to be rapidly deployable as a key part of our expeditionary operations. It will fire both precision and area munitions, as well as extend our ground-based fire support umbrella to 45 kilometers. HIMARS's tactical mobility, small logistics footprint, and capacity to deliver heavy volume fires against time-sensitive targets will, in conjunction with the Lightweight 155, at last remedy the fire support shortfall we have known for much of the last 2 decades.

Medium Tactical Vehicle Replacement. The Medium Tactical Vehicle Replacement is at the heart of Combat Service Support modernization and will provide our forces improved sustainment and permit maximum flexibility in responding to crises. The vehicle's weight and height allow it to be transported internally by the KC-130 Hercules aircraft and externally by the CH-53E Sea Stallion helicopter. The Medium Tactical Vehicle Replacement can readily negotiate terrain twice as rough as our current vehicles can, and it has increased payload, speed, and reliability.

Amphibious Shipping. Our military presence around the world is the framework that enables the application of the other elements of our National power—political, economic, diplomatic, cultural, and technological—to cultivate stability overseas. Yet in the 21st century, our forward land-basing options are not likely to increase and may even decline and, as a result, U.S. forces will rely less on large fixed bases overseas to fulfill America's global responsibilities. It is myopic, given the history of the 20th century, to think we can deter or defeat aggression on the global playing field solely with capabilities based in the United States. It has been proven many times over that presence in the operating area will be essential to our prosecution of a successful strategy. More specifically, it is going to take a sea-based presence in the operating area, a formation of joint assets that together project and sustain combat power ashore while reducing or eliminating our landward footprint. In the future, U.S. forces are going to increasingly deploy and sustain operations either from our sea-bases or our homeland.

Despite the fact that the enduring requirements of global sea control, strategic deterrence, naval forward presence, and maritime power projection have not declined, the United States Navy's fleet of ships has shrunk in number by 23 percent in the last decade. The requirement for our amphibious shipping, which has been under-resourced, remains the linchpin of the Corps' ability to influence the international security landscape, project power, and protect the Nation's interest during crises.

Simply put, virtual presence amounts to actual absence where global events are concerned. We cannot afford absence, which will likely result in vacuums that could be filled by those at odds with our National interests.

We are grateful for your support to replace four classes of older ships with the new LPD 17 *San Antonio* amphibious ship class. The delivery of these twelve ships to the fleet is programmed to be complete at the end of the decade. However, we remain concerned about schedule slippage in the LPD-17 program. Such delays are unacceptable and must be avoided. Likewise, we should also be concerned with replacing the LHD Wasp class ships. Considering the extended time-frame for ship design, construction, and delivery we need to ensure now that we are ready to replace the Wasp class when they reach the end of their 35 year service life starting in 2011.

Today's amphibious ship force structure, when the number of active fleet vessels is combined with Reserve ships that can be mobilized, has the capacity to lift nearly two and a half Marine Expeditionary Brigade assault echelon equivalents. It has long been recognized that we require an amphibious ship force structure capable of simultaneously lifting the assault echelons of three Marine Expeditionary Brigades. I strongly recommend that we commit to redress this shortfall as a matter of urgent priority.

The leases of our current fleet of maritime prepositioning ships (MPS) will expire in fiscal year 2009 and fiscal year 2011. The development of advanced maritime prepositioning capabilities will significantly increase the strength and flexibility of our sea-based expeditionary operations. The marriage of a modern amphibious fleet with maritime prepositioning shipping capable of hosting at-sea arrival and assembly of forces will eliminate the requirement for access to secure ports and airfields, and give our Nation an unmatched asymmetrical advantage in projecting power. The mobility and dispersion inherent to this future sea-basing concept promises to provide survivability far greater than that afforded by fixed land bases and will give us a revolutionary power projection advantage for many decades.

Convergence

Looking ahead, the programs we have planned will, with your support, begin to converge in our operating forces in 2008. In the not distant future, the Advanced Amphibious Assault Vehicle, V-22 Osprey, Joint Strike Fighter, KC-130J, Light-weight 155, High Mobility Artillery Rocket System, Medium Tactical Vehicle Replacement, Naval Surface Fire Support, amphibious shipping, and a number of other smaller programs will together dramatically transform our expeditionary capabilities. As discussed earlier, these systems promise to embody speed, stealth, precision, and sustainment as well as afford us modern agility, mobility, and lethality. But, we cannot stop here. We must work together with the Navy and our defense industrial base to exploit other opportunities to advance our capabilities in the future.

Continuous transformation and modernization are key to our long-term national interest; without them, we will fail to keep pace with change. The Marine Corps has an institutional tradition of such innovation and is expeditionary by nature, while being transformational by design. We view transformation as an evolutionary process, not a singular event.

TRAINING AND EDUCATION

People, not systems, are the fundamental component of the Corps. Just as we are continually striving to evolve our doctrine, equipment, and supporting establishment so that we can better win our Nation's battles, we are also constantly moving forward to improve how we train and educate our marines.

We believe the old adage, "you fight the way you train." Because of this, our training exercises are becoming ever more Joint and Combined in order to provide our marines with the experience that they will need when they are called upon to respond to crises—because there is no doubt that they will work alongside our sister services and partners from other nations in such circumstances. Moreover, we recognize that while our first duty is to be ready to win our Nation's battles, we are increasingly called on to execute missions at the lower end of the spectrum of operations. Accordingly, our exercise scenarios emphasize both conventional warfighting missions as well as operations other than war.

Experience in tandem with education is the best foundation for dealing with both difficulty and fortuity. Accordingly, we are not only focused on training our marines, but on educating them as well. We have expanded our distance learning programs to ensure that greater numbers of marines have the opportunity for education, not merely those who attend resident courses. In light of this, we are adjusting administrative policies to accommodate family concerns—such as spouses with careers or

children with exceptional needs—when selecting officers to attend our various schools that require a change in duty station. We have instituted a “year-out program” for our junior officers and SNCOs, within the corporate world, think-tanks, and Congress. This will widen perspectives and provide valuable experiences which will bolster our marines capacity to innovate and adapt in the years to come.

OUR MARINE WARRIOR CULTURE

At the very heart of the Corps and its relationship to each marine is our service culture. The Marine Corps is *sui generis*—that is, we have a nature that is distinct from all others. This goes beyond the unique characteristics of our expeditionary Marine Air-Ground Task Forces which are always prepared to be deployed overseas. It, in fact, pertains to our warrior ethos. From the individual marine to our institution as a whole, our model is the thinking and stoic warrior who fights more intelligently than his enemy and is inured to hardship and challenges.

Our commitment to maintaining our warrior culture is illustrated by our recently instituted martial arts program. We have developed a discipline unique to the Corps and are in the process of training every marine in its ways. This program seeks to promote both physical prowess and mental discipline. Successive levels of achievement are rewarded with different colored belts reflecting a combination of demonstrated character, judgment, and physical skill. This training will benefit marines in the missions we face; especially in peacekeeping and peacemaking operations where physical stamina and mental discipline are often vital. At its heart, our martial arts training is fundamentally concerned with mentoring our young men and women to understand that the keys to mission accomplishment often are a matter of using intelligence, strength, and self-control to influence circumstances, rather than always resorting to the application of deadly force. In this regard, our martial arts training supports our pursuit of non-lethal alternatives.

Under Title 10 of the U.S. Code, each of America's Armed Services has a different set of responsibilities, separate operating roles, and institutional structures that give every service a culture that is distinct from the others. Indeed, such cultural diversity should be considered a force multiplier. Consequently, “one-size fits all” policies are not often the best solutions in the Department of Defense, despite the importance of our on-going work to be fully joint in the conduct of operations. It is important to understand how the differences between the services may sometimes require separate and service-specific means of accomplishing universal goals such as promoting the quality of life of our people.

The recently enacted PERSTEMPO Program is an example of a requirement that is likely to impact each of the services differently. The 2001 National Defense Authorization Act mandated that any service member deployed more than 400 days in 2 years receive \$100 for each additional deployment day. While the larger services may be capable of managing the restriction placed on deployments and the additional costs associated with this requirement, the policy runs counter to the Corps' rotationally deployed, expeditionary force identity.

Our young men and women join the Corps to make a difference, to challenge themselves, and are prepared to deploy in service of our country. The testament to this is our success in recruiting and retention: the “acid-test” of any service culture. Our young marines and their families understand that our forward presence and expeditionary deployments are the core expression of our warrior culture. It is why they are marines. In turn, though the PERSTEMPO Program may be appropriate for the other services, its present construct does not comport with the Corps' culture and missions. The policy may in fact have the unintended consequences of having a profoundly deleterious effect on our cohesion, capabilities, training, and budget. As a consequence we are now conducting a study to analyze how we can better manage our personnel tempo and still meet our operational requirements while remaining true to our culture and our fiscal constraints.

CONCLUSION

One of the clearest indicators that people are our first priority is that approximately 60 percent of the Marine Corps budget is allotted to funding manpower programs. Yet, this fact also emphasizes the relative state of the other pillars of readiness, especially transformation and modernization; which have been underfunded for most of the past decade. The Marine Corps has long prided itself on being able to do more with less. Nothing reflects this more clearly than the fact that the Corps provides 20 percent of our Nation's expeditionary ground and aviation combat force for 6 percent of the Department of Defense budget.

Just as the other services have pursued plans to reorganize from a Cold War posture to one that matches the post-Cold War world, the Corps, too, has adapted itself

to the challenges and opportunities that have emerged during the last 10 years. I want to underscore that the Marine Corps intends to remain our Nation's premier expeditionary combined arms force with modernized sustainment capabilities. That identity is central to who we are as marines.

With that firmly in mind, the Corps has carefully plotted a course for the future. Indeed, if the programs we have currently planned are properly funded, we will see a convergence of transformation and modernization capabilities in our Marine Air-Ground Task Forces starting in 2008 that will revolutionize our expeditionary operations.

While our Nation's current strategy and force structure may change, it is clear that a sustained increase in resources will yield the operational strength, flexibility, and resilience we envision in both the short and the long-term. With regard to the Marine Corps, an increased investment of approximately \$1.8 to \$2 billion a year sustained for the next 8 to 10 years—a modest step that is less than 1 percent of what is allotted to the overarching national security budget—will permit us to achieve our vision and deliver a Marine Corps, in partnership with the U.S. Navy, which will be capable of defending America's global national security interests in the 21st Century. Such an investment addresses our warfighting readiness requirements, accelerates the pace of our transformation and modernization, and recapitalizes our infrastructure. The fiscal year 2002 plus-ups provided by the administration during budget wrap-up reduced our unfunded requirements by approximately \$400 million. With your consistent support we can achieve our goals and provide our Nation with a Marine Corps that will be well on the road to dramatically transformed expeditionary capabilities.

Chairman LEVIN. General Jones, thank you so much.

STATEMENT OF HON. JAMES G. ROCHE, SECRETARY OF THE AIR FORCE

Secretary ROCHE. Mr. Chairman, Senator Warner, members of the committee: I am honored to appear before you today for the first time as Secretary of the Air Force and to be in the company of my fellow service secretaries and the distinguished flag officers who lead the world's finest military team.

I, too, would like to pause and say something special about Mike Ryan. He is certainly a class act. In fact, besides being a superb military officer, I find that he is a man for all seasons, and I commend him to you, sir.

With your permission, Mr. Chairman, I will make just a short opening statement, as will General Ryan, and we will request our written statement and the Air Force 2001 posture statement be included in the record.

Mr. Chairman, America is an aerospace Nation. During the last 100 years our country has harnessed and developed aerospace power to accomplish many impressive feats, including revolutionizing the nature of warfare, changing the face of transportation and the conduct of global trade, and enabling mankind to open doors to a new universe of discovery in space. Those accomplishments, Mr. Chairman, form the legacy of the twentieth century.

In the 100 years to come, aerospace power, properly guided and nourished, will further transform the interactions among nations for the benefit of our own citizens. With its attributes of speed, range, stealth and precision, our Nation's outstanding Air Force will continue its current global reconnaissance and strike superiority and the greatest deterrent power that capability brings with it.

The President's fiscal year 2002 budget supports critical needs for our 21st Century Air Force. It places a special and very welcome emphasis on people and readiness, areas of immediate con-

cern to our forces. The current quadrennial review process and the analysis the Secretary of Defense is leading in the Department of Defense will address our strategy, force structure, and efficient management of our resources for the longer term.

As these intellectual efforts reach their conclusions, my Air Force colleagues and I will be prepared to consider and orchestrate the role of military aerospace power in the joint and combined operations of the future.

We also are striving for efficiency. We recognize that we cannot just keep coming back and asking for more money, but we are looking for things we can do to free up resources so that we can in fact devote those resources to modernization and transformation where it makes sense to do so.

Mr. Chairman, I thank you and Senator Warner and members of your committee for your tremendous support that has enabled our Air Force to become without question the world's finest. We did not get here on our own.

I look forward to your questions and advice and the dialogue we will conduct together in the months and years to come. Thank you, sir.

[The joint prepared statement of Secretary Roche and General Ryan follows:]

PREPARED JOINT STATEMENT BY HON. JAMES G. ROCHE AND GEN. MICHAEL E. RYAN, USAF

Mr. Chairman and members of the committee, the Air Force has and will continue to focus on aggressive transformation to the extent our budget allows. This fiscal year 2002 budget shores up some of our most critical people and readiness concerns and allows us to remain the world's most respected aerospace force.

During the last 100 years, U.S. air and space competence has revolutionized the conduct of warfare, providing near-instantaneous global reconnaissance and strike capability across the full spectrum of engagement, from combat operations to humanitarian aid. This competence has contributed to our ability to deter wars, as well as our ability to win them. However, in this century, we find that rogue nations, the proliferation of weapons of mass destruction, and the rapid spread of information technology, have the potential to threaten our National interests. This changing security environment presents us with both unique challenges and opportunities.

The Department of Defense is in the midst of numerous studies and analyses—the results of which will undoubtedly influence our future aerospace strategy. We must develop a force structure that, when teamed in joint or combined operations, will be effective in maintaining the peace and preserving freedom. We must also deepen and enrich the bonds of trust with the men and women who serve in the Air Force in order to attract and retain the very best individuals. We must continue to reform our policies, practices, and processes to make our Service more effective and efficient. Finally, we must pay special attention to the shrinking industrial base and evaluate ways to improve our current acquisition processes to ensure innovative future capabilities for the Nation.

We respectfully submit this testimony to recount our accomplishments during the past year and outline our plans for the future. Without the steadfast support of the President and Congress, our past successes would not have been possible. With your continuing support, we will build upon those successes.

AIR FORCE POSTURE STATEMENT—OVERVIEW

As we transition to the new century, even the new millennium, we will use this posture statement to reflect on what the Air Force accomplished during 2000, where we want to go in the future, and how we plan to get there.

We're a service emerging from a decade of continuous transformation. During this period, we have molded and transformed aerospace power into a crucial component of joint operations. We defined ourselves with "integrity first, service before self, and excellence in all we do" and developed ourselves to be "fast, flexible, and decisive."

It was also a time that took a heavy toll on our people and our systems. Therefore, we are developing new initiatives in our *People, Readiness, and Modernization* programs. If we are to continue to protect America's interests with aerospace power, we must implement these initiatives.

PEOPLE

The state of the economy has exerted considerable pressure on our ability to retain and recruit the right people. Frankly, it is difficult to compete with the financial compensation available in the private sector. Consequently, taking care of our people is our top priority. Taking care of people starts with their professional lives, so that they are satisfied with the work they do and know they're accomplishing something important. It also, of course, means providing them attractive compensation, benefits, housing, and facilities that show we value their efforts and care about their families.

READINESS

Our dominance of the full spectrum of operations tends to overshadow what has happened to our readiness. Responding across this full spectrum of operations necessitates we have a certain number of units ready to deploy in the first 30 days of conflict. This is the basis of our readiness requirement of 92 percent. Since 1996, our worldwide combat force readiness rates have decreased 23 percentage points to a rate of 68 percent in April 2001. Furthermore, our overall Air Force readiness is lower than any time since June 1987. We are capable of winning today; however, we are concerned about these trends in readiness indicators. A major factor in the decline is the increasing age of our aircraft. For example, our flying hours have remained relatively constant over the past 5 years, but their cost has increased by over 45 percent after inflation. Older aircraft are simply more difficult to maintain as mechanical failures become less predictable, repairs become more complicated, and parts become harder to come by and more expensive. But, even with these contributing factors, we had the best year in our history for aviation safety, a clear measure of our people's professionalism.

MODERNIZATION

Today, the average age of our aircraft is almost 22 years old. Even if we execute every modernization program on our books—which amounts to procuring about 100 aircraft per year in the near future—our aircraft average age continues to rise, reaching nearly 30 years old by 2020. In order to level off this increasing trend, we would have to procure about 150 aircraft per year. To actually reduce the average age of our aircraft, we would need to procure about 170 aircraft per year. Similarly, where as industry replaces or totally renovates their facilities on a 50-year cycle, competing priorities have resulted in a 150-year facilities recapitalization rate. We are in a position where we can only address the most urgent repair issues, while our backlog of real property maintenance continues to grow. We are working to slow down the aging of our fleet and infrastructure, but the climbing costs of operations and maintenance, as well as competing modernization effectiveness goals, continue to prevent that from happening. Consequently, we do not have the procurement funding to recapitalize our fleet and facilities to the extent that we would like.

However, even with these challenges, we have molded and transformed aerospace power into a crucial component of joint operations. Because of this, we have expanded our vision for the future. Our new *Vision 2020—Global Vigilance, Reach and Power* captures the philosophy that transformed us into a “force of choice” for rapid expeditionary operations. Our strategic plan institutionalizes this vision by linking the capabilities we need in the future with what we do best—our core competencies.

Core Competencies

Aerospace Superiority—The ability to control what moves through air and space . . . ensures freedom of action.

Information Superiority—The ability to control and exploit information to our Nation's advantage . . . ensures decision dominance.

Global Attack—The ability to engage adversary targets anywhere, anytime . . . holds any adversary at risk.

Precision Engagement—The ability to deliver desired effects with minimal risk and collateral damage . . . denies the enemy sanctuary.

Rapid Global Mobility—The ability to rapidly position forces anywhere in the world . . . ensures unprecedented responsiveness.

Agile Combat Support—The ability to sustain flexible and efficient combat operations . . . is the foundation of success.

Nothing illustrates our culture of transformation better than the Expeditionary Aerospace Force—the “EAF.” In October 1999, the heavy demand for aerospace power drove us to restructure our forces so we could inject some stability and predictability into the lives of our people. By December 2000, we had completed the first full rotation cycle of the EAF. In the span of less than 2 years, we succeeded in restructuring ourselves into a more sustainable, flexible, and responsive force. We now give the commanders in chief (CINCs) expeditionary aerospace packages that are tailored and trained-to-task to meet their full mission requirements.

In 2000, we were involved in the full spectrum of operations—from famines, fires, and hurricanes to major contingency operations. Yet, the diversity of these missions didn’t stifle us; it stimulated our creativity. We’re already light and lean, so now we’re pushing the envelope with technologies that will revolutionize the way we deliver aerospace power for the Nation. We are developing directed energy weapons capable of effects at the speed of light; unmanned aerial vehicles that reduce the risk to our people while giving us greater capability at a lower cost; space technologies that radically increase the effectiveness of our aerospace operations; and aircraft like the F-22 that are more survivable and lethal than our current fighters. We don’t wait until we’re forced to improve—innovation and adaptation are our heritage.

Our creativity also extends to how we conduct business inside our organization. We are realizing significant cost efficiencies by benchmarking the best in commercial and government business practices and adapting them to our unique environment. We are leveraging technology by integrating our people, operations, and oversight into a globally-connected, enterprise-wide, and secure information network. We are conducting manpower and program competitions to take advantage of the best opportunities for outsourcing and privatization. We’re improving the way we plan, program, acquire, and protect our air, space, and information systems. Our reinvention teams have saved more than \$30 billion during the last decade. Of course better business practices aren’t a choice; they’re necessary to maximize the returns on our Nation’s investment.

This posture statement will give you a good idea about where we’ve been, where we’re going, and what’s necessary to remain the world’s best aerospace force. Aerospace power is America’s asymmetric advantage, and we’re determined to make sure America keeps it.

AMERICA’S AIR FORCE IN 2000

In 2000, we participated in the full spectrum of military operations—from deterrence and combat contingency operations to humanitarian aid and disaster assistance. Across this spectrum, it was Global Vigilance, Reach, and Power that was essential for assuring U.S. national security and international stability. We provided global vigilance using our intelligence, surveillance, and reconnaissance (ISR) assets; force protection measures; and deterrence missions. Our mobility assets and pre-positioned munitions contributed to our global reach. Finally, we displayed global power in Iraq and the Balkans with our unmatched capability to create precise military effects when called upon or threatened. These three facets of aerospace power are interdependent, collectively providing rapid aerospace dominance for America. Perhaps most importantly, all these accomplishments were against the backdrop of a pivotal transformation in the way we structure our forces to support expeditionary operations. This chapter will describe these efforts during the past year.

THE EXPEDITIONARY AEROSPACE FORCE

This year we completed our organizational transformation to an Expeditionary Aerospace Force—the EAF—a groundbreaking approach to organizing aerospace capability. Given the demand for aerospace forces over the past 10 years, we designed a capability-based force structure to ensure that on-call, rotational forces can effectively meet both our steady-state and “pop-up” commitments, while giving our people more predictability and stability in their deployment schedules. We began implementing the initiative in October 1999, and successfully completed the first full rotation of our ten Aerospace Expeditionary Forces—the AEFs—in December 2000.

The EAF includes both deployable and non-deployable warfighting and support forces. Our deployable AEFs are 10 packages of aerospace power. They provide us with the rotational base required to conduct multiple, concurrent small-scale contingencies, immediate crises, and “pop-up” engagements. These AEFs must be fully resourced to provide the full spectrum of aerospace power capabilities required by the warfighting CINCs. Our AEF Prime forces include those operational capabilities not organically assigned to the AEFs. They comprise our nuclear alert, regional com-

mand and control, and space operation forces, without which we could not meet our steady-state and contingency commitments. The AEFs are deployed and sustained by a robust mobility force called EAF Mobility. EAF Mobility is the Nation's fastest system to transport the most urgent cargo, from troops and equipment to humanitarian aid. Underlying the AEFs, AEF Prime, and EAF Mobility is EAF Foundation—the acquisition, medical, depot, training, and infrastructure resources needed to keep the other parts of the EAF operating.

The EAF offers predictability for commanders to reconstitute, train, and organize their assigned forces to better meet their upcoming contingency requirements. Two AEFs are on-call every 3 months within the full-rotation period of 15 months. Additionally, two Aerospace Expeditionary Wings (AEW) supplement these AEFs, alternating on-call duties every 120 days for “pop-up” conflicts. Two AEFs and one AEW represent about 20 percent of our combat forces, which equates to the maximum commitment the Air Force can maintain indefinitely without adversely impacting training or readiness. If tasked beyond this level, we would conduct surge operations as required. Upon completion of large-scale operations, the EAF would then reconstitute before beginning a new rotational cycle. From now on, we will use the EAF to provide Joint Force Commanders trained-to-task, capability-based packages to meet their specific requirements.

AEFs offer many operational advantages:

- An AEF is fast—our goal is to deploy one AEF, or about 120 aircraft and 10,000 airmen, within 48 hours, and we strive to provide up to 5 AEFs in 15 days.
- An AEF is light and lean—our global command and control infrastructure allows high-fidelity operational support in near real-time from the continental U.S. This enables a “reachback” capability that helps minimize the deployment of supporting equipment and personnel and simplifies force protection.
- An AEF is lethal—it is capable of striking more than 200 targets per day.
- An AEF is flexible—we provide a tailored, trained-to-task, strategically relevant force that rapidly projects power anywhere in the world.

Lessons learned from the first AEF rotation are improving the force's expeditionary structure and concepts of operations. For example, our low density/high demand (LD/HD) platforms, such as the Airborne Warning and Control System (AWACS) and U-2 reconnaissance aircraft, have been strained by supporting continuous operations—deploying up to five times more frequently than other forces. As a short-term remedy, we stood-up another AWACS squadron (without procuring additional aircraft) to better align the squadrons with the AEF rotation. For the long-term, instead of procuring more LD/HD platforms, we are developing transformational solutions to perform these missions more effectively, while providing more persistence over the target area. For example, we are exploring the transition of the U-2 and other over-tasked ISR missions to unmanned aerial vehicles (UAVs), common wide-body (multi-radar) aircraft, and/or space-based assets. These future capabilities should arrest some of the operations tempo issues facing our most critical LD/HD assets.

The success of the EAF depends on the vital contributions of all the components of the Total Force—active, guard, Reserve, civilians, and contractors. The stability of the 15-month cycle has allowed the Air Force Reserve and Air National Guard to meet (or even exceed) their programmed 10 percent tasking to the EAF. Our Reserve components currently provide the EAF about 7 percent of its expeditionary combat support, 20 percent of its combat forces, 33 percent of its air refueling assets, and 44 percent of its intratheater airlift.

AEROSPACE OPERATIONS

Aerospace power can bring a rapid halt to human suffering or attacking forces. Our presence in struggling regions of the world, like East Timor and Mozambique, brings help where it is needed, builds goodwill, improves international relations, and provides valuable real-world training. Alternatively, we can create military effects against our adversaries, like we have done in the Balkans and Southwest Asia.

Our aerospace forces have the flexibility and agility for simultaneous engagement across the full spectrum of military operations. We are prepared to maintain regional stability, protect national interests, and help win America's wars whenever called. The following are a few of the operations in which we participated this year.

Operation Stabilise

When the province of East Timor attempted to break away from Indonesia, the resulting conflict caused thousands of residents to flee their homes. The U.N. relied

on our airlift to deliver the manpower and supplies to stabilize the region. Inter-theater airlift, provided by C-5s, C-141s, and C-17s, transported 1,580 Thai peacekeepers to the region. Intratheater C-130H aircraft from Elmendorf AFB, Alaska, flew over 600 hours transporting more than 1,800 personnel and 1,250 tons of combat support equipment and humanitarian aid to Dili and Komorro in East Timor.

Operation Atlas Response

In March 2000, flooding devastated Mozambique, driving hundreds of thousands of people from their homes. We responded as part of Joint Task Force Atlas Response, flying more than 600 sorties that delivered 970 tons of crucial supplies. Crews flying C-130s and C-17s transported nearly 2,000 non-governmental relief workers to Maputo, Mozambique's capital city, and Beira, the country's second largest city. Rescue and special operations crews played a key role ensuring supplies were distributed properly.

Balkan Operations

In 2000, we conducted 16 percent, or about 2,000 of the 12,000 combat sorties flown in the Balkans in support of the Kosovo Forces (KFOR) and Stabilization Forces (SFOR). Yet this statistic significantly understates our contribution to these Balkan operations. Our fighter, tanker, command and control (C²), ISR, and airlift aircraft; C² facilities; combat search and rescue forces; special operations units; UAVs; and space-based resources were indispensable to the performance of all joint and coalition operations.

United States Wildfire Relief

Our people played a pivotal role fighting the worst wildfires to ravage the western United States in 50 years. In 48 airlift missions, we transported 330 tons of cargo and over 5,900 Army, Marine, and civilian firefighters to Idaho, Montana, and California. Three Air National Guard and one Reserve C-130 aircraft, equipped with the Modular Airborne Fire Fighting System (MAFFS), flew 870 missions and dropped almost 2.3 million gallons of fire suppressant across 19 states within a 6-month period.

Southwest Asian Operations

During 2000, we maintained a continuous presence of 8,000 airmen in Southwest Asia in support of Operations Northern Watch and Southern Watch. Our aerospace superiority assets (including air, space, and information systems) produced an environment that permitted more than 23,000 coalition combat sorties without a single combat loss. Of these sorties, 63 percent, or 14,500, were flown by the Air Force. We responded to Iraqi no-fly zone violations and air defense threats with precision-guided munitions (PGMs), destroying a significant portion of Iraq's anti-aircraft artillery systems, threat radars, and command centers.

Northeast Asian Operations

As the Nation marks the 50th anniversary of the Korean War, we continue to maintain a significant presence in South Korea and Japan, and conduct joint and combined exercises with the host nations. Cope Thunder, executed in early 2000, provided realistic training for aircrews, operations and logistics personnel, and selected C² operators by exercising complex combat operations across the Pacific Theater. We also participated in exercise Ulchi Focus Lens, the world's largest annual joint and combined computer simulation war game conducted with the Republic of Korea's national mobilization exercise "Ulchi."

DETERRENCE

America deters potential aggression by maintaining the ability and resolve to use overwhelming force against any adversary. We maintain this posture through our expeditionary, rapid global mobility, nuclear, and space forces. The bomber, with its unique strengths of flexible payload, global range, and in-flight retargeting or recall, is the cornerstone of our conventional and nuclear force projection capability. Additionally, the land-based intercontinental ballistic missile (ICBM) provides a quick-reaction and highly reliable force with a mission capable rate above 99 percent.

COUNTER-NUCLEAR, BIOLOGICAL, CHEMICAL OPERATIONS

The potential use of weapons of mass destruction (WMD) against America and its allies is one of the most complex threats facing the DOD. Our balanced response to the proliferation of WMD, as outlined in our recently completed Air Force Counter-Nuclear, Biological, and Chemical (NBC) Operations Doctrine document, integrates the four pillars of counterproliferation—proliferation prevention,

counterforce strategies, active defense efforts, and passive defense measures. Proliferation prevention restricts the spread of NBC weapons through political and diplomatic efforts, such as export controls and treaty agreements, but may also include denial operations when directed by the National Command Authorities. Counterforce operations include attacking an adversary's NBC weapons and their associated production, transportation, and storage facilities prior to their use. Active defense focuses on intercepting conventional and unconventional NBC delivery systems before they reach friendly forces. Finally, passive defense measures, including force protection, protect our people from the effects of an NBC attack and enable sustained aerospace combat operations.

Our counter-NBC operational readiness initiative sets Air Force-wide standards for readiness, identifies shortfalls, and develops capabilities to effectively cope with NBC attacks. This initiative includes our recently developed counter-NBC roadmap and chemical warfare concept of operations (CW CONOPS). The roadmap is an innovative investment strategy that cuts across all facets of Air Force plans and programs to increase counterproliferation visibility. The CW CONOPS, developed by our Pacific forces, is a plan to help us maintain high-paced operations during NBC attacks on air bases.

FORCE PROTECTION

Force protection comprises the activities that prevent or mitigate hostile actions against our people and resources when they are not directly engaged with the enemy. In 2000, our force protection personnel made 41 vulnerability assessments that were used to improve our physical security, the safeguarding of our food and water supplies, and our ability to respond to WMD incidents both at home and abroad. We developed a surface-to-air missile (SAM) footprint mapping capability, which couples site-specific topography with the effective range of hand-held SAMs, to direct security forces to probable threat locations. We have also instilled a force protection mindset in our people by incorporating force protection into the curriculum at all levels of professional military education and as part of Warrior Week during basic training. Protecting our people remains a top priority at all command levels.

INFORMATION ASSURANCE AND NETWORK DEFENSE

Information assurance (IA) and computer network defense are the strategy and means to deliver crucial information securely to the warfighter. We are in a daily battle for information superiority. Our air tasking orders, flying schedules, maintenance and logistics records, C², and other operational functions are carried over our networks, making them a key target for potential adversaries. In 2000, we developed a plan to integrate operations, people, technology, and oversight through an enterprise-wide, network-centric concept. This plan includes operations and information protection; automated and dynamic detection and response; consolidated situational awareness and decision support; and IA in deployed and classified environments. For example, we monitor and evaluate network anomalies detected by our automated security incident measurement system (ASIMS). This system recognizes the latest hacking techniques to ensure early warning of attempted penetrations into our systems.

INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE

Our air-breathing and space-based ISR assets combine to provide America global vigilance by exploiting the high ground and actively monitoring the entire globe for emerging threats and treaty compliance. They provide an integrated capability to collect, process, and disseminate accurate and timely information that allows our decision-makers to rapidly analyze and respond to changing global conditions, and enables us to obtain and maintain decision dominance. In 2000, our ISR assets monitored Iraqi compliance with U.N. sanctions as part of Operations Northern and Southern Watch and were key to providing critical real-time decision-making information to NATO leaders in the Balkans.

COUNTER-DRUG OPERATIONS

We are actively supporting the National Drug Control Strategy. Our AWACS and other ISR assets, with tanker support, detect suspected drug traffickers in the South American source zone and monitor their activities through the Caribbean transit zone to their arrival and apprehension in the United States. Air National Guard forces conduct the majority of our counter-drug missions, employing an impressive variety of capabilities from intelligence and airlift to ground-based radar and fighter

interception. The Guard's domestic counter-drug operations focused on state and Federal law enforcement support, interdiction, eradication, and drug demand reduction. The Reserve was also an important participant, flying patrol missions, and providing mobile training teams, intelligence, and linguists. In 2000, the Reserve provided 68 personnel, flew 105 missions, and conducted 15 mobile training team deployments in support of worldwide counter-drug operations.

Our civilian auxiliary, Civil Air Patrol (CAP), joined the Nation's counter-drug program in 1986, partnering directly with U.S. Customs and the Drug Enforcement Administration. Since then it has flown thousands of hours a year in support of counter-drug efforts. During 2000, the CAP efforts prevented approximately \$3 billion worth of narcotics from entering the U.S.—a great all-volunteer accomplishment. The active, Guard, Reserve, and CAP are crucial partners in the Nation's "war on drugs."

SECURITY ASSISTANCE

Cooperative foreign relationships are crucial to building multinational coalitions, securing international access, and sustaining our commercial defense industry. In 2000, we managed more than 3,800 contracts for sales of aircraft, spare parts, munitions, and training valued at over \$103 billion. These contracts included sales of over 240 F-16s to the United Arab Emirates, Greece, Israel, and several other countries. Through the foreign military sales and international military education and training programs, we trained approximately 4,600 international students in warfighting and professional military education.

Our international armament cooperation program co-developed and fielded interoperable weapon systems that effectively leveraged DOD resources by cost-sharing, employing foreign technical expertise, and securing larger economies of scale (reducing the cost per unit). Under this program, we have reached more than 360 agreements with our allies and coalition partners involving research and development, production, equipment loans, and scientific and technical information exchanges.

SAFETY

The safety of our people is a principal concern in all our operations. A combination of increased funding for aircraft improvements and the use of operational risk management yielded positive results in several safety categories. We had the lowest flight mishap rate in our history—1.08 major mishaps per 100,000 hours of flight time. On the ground, we had our second lowest annual number of off-duty fatalities, with 50 (24 percent below our 10 year average of 65), and on-duty fatalities, with 6.

We continue to build on this success with innovative safety tools such as bird avoidance warning systems; an automated system to expedite mishap collection methods that supports operations and acquisition decision making; and a quality assurance system that ensures fleet-wide flight safety deficiencies are rapidly corrected.

CONCLUSION

In 2000, we honored our tradition of operational excellence—firmly establishing our position as the National Command Authorities' frequent choice for fast, flexible, and precise military response. We also have done something difficult for many large organizations—we overcame the inertia of the status quo, improving both how we operate and the quality of life for our people. We are now an Expeditionary Aerospace Force—organizationally transformed to sustain America's aerospace advantage. Through global vigilance, reach, and power, we wield the unprecedented ability to observe events around the globe, rapidly reach out to influence them, and if necessary, bring to bear the force needed to secure our National objectives.

In this chapter we recounted some of our activities during the past year. In the next chapter we will move from the present to the future. Specifically, the discussion will turn to our understanding of the type of capabilities we must pursue to successfully contend with the future security environment.

AMERICA'S FUTURE AIR FORCE

The history of the Air Force is marked by an unshakable dedication to the promise and potential of aerospace power as envisioned by our early pioneers. This enduring commitment has kept us on the cutting edge through continual organizational, operational, and technological transformation. We no longer narrowly focus on one overarching adversary, but rather on *full-spectrum* employment of the Total Force whenever our Nation calls. In the new strategic environment, we integrate

air, space, and information to dominate the entire vertical realm. Indeed, we have transformed ourselves from a forward-based, organizationally stovepiped force structure to a forward-deploying, integrated expeditionary force structure. Moreover, we accomplished this through a steady, well-planned process of continuous innovation. Given the increasing complexity of warfare and an ever-changing adversary, expeditionary aerospace power offers an expanded range of strategic and operational options across the entire spectrum of engagement. Our commitment to technologies such as stealth, precision standoff weapons, and information warfare offers America new strategic options with less risk. This continuous transformation will preserve the Nation's vital role in world leadership and the ability to defend its interests around the globe.

THE GLOBAL SECURITY ENVIRONMENT

Today's security environment is unique in American history. We do not have a "peer competitor," nor are we likely to see one in the near future. At the same time, we face a number of uncertainties and potential challenges that threaten America's security and interests. These threats include regional hegemonies, asymmetric and transnational threats, and crises that may require intervention for humanitarian purposes.

A hostile power, for example, may attempt to dominate a region by intimidating our allies or pursuing interests contrary to our own. Such a power may use anti-access strategies that attempt to deny our ability to deploy stabilizing military force. Today, we see many potential adversaries developing theater ballistic missiles and other anti-access capabilities to achieve this goal. Renegade actors may use asymmetric means such as terrorism, information warfare, or weapons of mass destruction to radically enhance their disruptive capabilities at a relatively low cost. We experienced such a tragedy in 1996 when 19 deployed airmen were killed during the Khobar Towers bombing in Saudi Arabia. Other transnational or small-scale contingencies, including ethnic conflicts, international criminal activity, or insurgencies, may threaten our interests or the safety of our citizens (e.g., illicit drug activity in Latin America). Non-state actors and criminal organizations will continue to threaten American interests through sophisticated technical means or by physical attack. Crises that can spill over state borders that require humanitarian assistance, such as environmental disasters, will persist. We recently responded to the floods in Africa and the earthquakes in India.

Space is an area where threats might emerge in the coming decade. Some of our potential adversaries have the ability to improve both their offensive and defensive military capabilities with commercially available space and information technologies. At the same time, they may try to neutralize our space assets, especially as space becomes more vital to our military, civil, and commercial interests.

Ultimately, any national-level response is predicated on the ability to rapidly adapt military capabilities and operational concepts to precisely achieve the desired objectives. We demonstrated this ability during Operations Desert Storm and Allied Force, and we will be even more formidable in the future. Should deterrence fail, aerospace power is a *force of choice* for rapid response with minimum risk to U.S. personnel and non-combatants.

OUR VISION

Our vision, *America's Air Force: Global Vigilance, Reach, and Power—Vision 2020*, published in June 2000, provides a template for the ongoing transformation of the Air Force and aerospace power into the 21st century. Our vision underscores that people—our Total Force—are the foundation of the Air Force. We describe an aerospace domain best exploited by an integrated air, space, and information force. We present our forces in capability-based packages, called Aerospace Expeditionary Forces (AEF), each built upon the pillars of aerospace expertise, our core competencies—Aerospace Superiority, Information Superiority, Global Attack, Precision Engagement, Rapid Global Mobility, and Agile Combat Support. In the end, our vision focuses us on our mission: *To defend the United States and protect its interests through aerospace power.*

OUR STRATEGIC PLAN

We believe that aerospace power will be, indeed must be, increasingly called upon as the Nation's military instrument of choice in an uncertain world. No other option is as fast, flexible, or necessary to the execution of joint operations. The Air Force Strategic Plan is the broad framework to institutionalize our vision. It anticipates the future security environment and provides guidance on major force modernization and investment strategies by identifying fourteen critical future capabilities

based upon the Air Force core competencies and support areas. It is our roadmap to the future.

THE TOTAL FORCE

Our Total Force builds on a foundation of high standards and strong cooperation among our active, Reserve, Guard, civilian and contractor personnel. Simply stated, we could not perform our mission without the combined contributions of all components. On any given day, members of the Guard and Reserve work side-by-side with their Active Duty counterparts. Today, our Guard and Reserve assets account for 38 percent of our fighter force, 60 percent of our air refueling capability, 71 percent of our intratheater airlift, and significant portions of our rescue and support resources. The Reserve is the sole provider of unique capabilities such as aerial spray, space shuttle helicopter rescue support, and hurricane hunting, while the Guard provides 100 percent of our homeland air defense capability. Additionally, the Guard and Reserve have an increasing presence in the bomber force and in space, intelligence, and information systems. Guard and Reserve units provide essential support for training new pilots, manning radar and regional control centers, performing flight check functions at our depots, and conducting space operations. Equally important, our civilian members and contractors provide specialized administrative, technical, and managerial expertise that complement the functions performed by uniformed members. Without these combined skills, we could not operate as an expeditionary force. In the future, we will foster an even closer and more interdependent partnership between all of our components through new organizational structures and more interactive and flexible career patterns.

AEROSPACE INTEGRATION

Our domain stretches from the earth's surface to the far reaches of our satellites' orbits in a seamless operational medium. However, even with the best aircraft and spacecraft optimized for their respective environments, the aerospace effects we create hinge on our people and their ability to rapidly and continuously integrate our air, space, and information systems. Accordingly, we have modified our command organizations to take full advantage of the resulting synergy.

In September 2000, for example, we designated the Aerospace Operations Center (AOC) as a "weapon system" of the future. This hub of advanced networks will gather and fuse the full range of information in real-time—from the strategic to the tactical level—giving Joint Force Component Commanders actionable knowledge to rapidly employ their forces in the battlespace.

Effectively employing integrated aerospace power requires commanders who exploit the entire aerospace continuum, both on a regional and global scale. This new paradigm of employment must be instilled in the minds of airmen at all levels of Air Force professional military education. To help achieve this end, we created an Aerospace Basic Course for newly commissioned officers to ensure they understand the different elements of aerospace power. Similarly, our Developing Aerospace Leaders initiative is determining the best way to cultivate the skills needed to lead in a dynamic, changing environment. We are infusing air, space, and information operators into all key command and training courses to expand their breadth of experience and core knowledge. Finally, our Space Warfare Center established a space aggressor squadron to increase the awareness of threats from space-capable adversaries and improve our ability to defend against them.

EVOLVING THE FULL-SPECTRUM EAF

Providing the flexibility needed for full-spectrum operations requires continued efforts to round out the capabilities of our AEFs to make them virtually interchangeable. Currently, our 10 AEFs are not equal in capability. For example, only three of the ten AEFs are equipped with long-range, precision standoff strike capabilities, and only nine have an F-16CJ squadron for suppression of enemy air defenses.

As the EAF continues to mature and technologies advance, we will expand the capabilities each AEF can provide. We will enlarge the battlespace an AEF can control; enhance our ability to do real-time, adaptive targeting; and dramatically increase the number of targets an AEF can engage in a day. Finally, we will improve our expeditionary combat support capabilities—effective, responsive logistics are the key to sustaining expeditionary forces and operating from austere locations.

OPERATIONS IN THE FUTURE GLOBAL SECURITY ENVIRONMENT

The changing security environment requires us to change the way we plan and operate. Aerospace power's ability to perform effects-based operations (i.e., focusing

on achieving desired effects versus creating target lists) means we can support the joint force commander in ways unimaginable only a few years ago. Our ongoing transformation enables our long-range, standoff, all-weather precision, and stealth capabilities to rapidly counter any adversary's attempt to deny us access to a theater.

This global strike capability, combined with responsive logistics, will then help to achieve the rapid halt of human suffering or threatening forces. Lastly, the massing of joint firepower at the time and location of our choosing will create the conditions that permit the safe deployment and employment of our joint forces. Once deployed, our force protection measures will provide defense against asymmetric threats. Through long-range stealth, precision standoff weaponry, and information operations, we are able to project substantial effects without subjecting our forces to substantial risk. Aerospace power's inherent versatility and precision form a large part of this tremendous capability, giving our leaders unprecedented strategic initiative and flexibility now and in future operations. Aerospace power is the Nation's asymmetric advantage.

HOMELAND SECURITY

The Air Force has always contributed to homeland defense by deterring aggressors, intercepting intruders, and providing ballistic missile warning. However, defending our homeland has assumed new and daunting dimensions with the increased threat of terrorism, the spread of information warfare techniques, and the proliferation of weapons of mass destruction. Our traditional defenses are often incomplete against these unconventional threats.

We are significant supporters of a multi-layered missile defense system incorporating space-based elements that provide effective, affordable, global protection against a wide range of threats. Future space capabilities like the Space Based Infrared System (SBIRS) will greatly enhance our ability to track and engage ballistic missiles, while space-based radar technologies (if transitioned into deployed systems) will track fixed and mobile ballistic missile launchers. The Airborne Laser (ABL) will engage boost-phase ballistic missiles, while the F-22, working with advanced ISR systems, will defend against cruise missiles. The Air Force expects to be a principal player in any future missile defense system.

The Total Force brings a variety of capabilities to the defense of our homeland. The Air National Guard is positioned to ensure the air defense of the Nation while providing critical resources like airlift, command and control, and disaster preparedness response forces to other lead agencies and the Joint Forces Civil Support Teams. Our Air Force Medical Service is acquiring a variety of modular packages that can be used to support civilian authorities requesting our assistance at home or abroad. The Small Portable Expeditionary Aeromedical Rapid Response or "SPEARR" teams deploy ten highly trained specialists within 2 hours of notification with the capability to provide a broad scope of care, including initial disaster medical assessment, emergency surgery, critical care, and patient transport preparation. In February 2001, we participated in a 3-day bioterrorism exercise, Alamo Alert, in San Antonio, Texas. This tabletop exercise explored city, county, state, and Federal responses to the release of a biological agent. We will use the lessons learned from this exercise to merge the disaster response plans of different agencies so they will work together more effectively. Developing a robust homeland defense strategy is critical to the Nation. The Air Force stands ready today, as in the past, to contribute our special capabilities, as well as develop new technologies that can aid civil authorities in combating any threat or attack to our homeland.

URBAN OPERATIONS

By 2015, half the world's 7.2 billion people will live in urban centers. The growing migration to cities means an increased likelihood that military targets will be in close proximity to non-combatants. We must, therefore, place special emphasis on producing precise, predictable effects with minimal collateral damage to surrounding structures. Advances in target identification and precision weapons delivery have propelled us from committing multiple aircraft for each target during World War II (e.g., 1,000 B-17 sorties dropped 9,000 bombs to destroy one target in 1943) to utilizing a single aircraft to neutralize multiple targets during Operation Allied Force (e.g., one B-2 with 16 bombs hit 16 different targets in 1999). We are pioneering a new class of non-kinetic weapons that will create the desired effects without death and physical destruction. Large-scale conflicts will always include some degree of devastation, but non-kinetic weaponry and precision effects provide expanded options for our Nation's leaders across the entire spectrum of conflict. Precision effects also offer the potential to significantly reduce the duration of a conflict

by concentrating our force on high-value military targets. This minimizes collateral damage, unintended consequences, and the accompanying pressures such problems bring to coalition cohesion.

SCIENCE AND TECHNOLOGY COMMITMENT

Our commitment to a strong science and technology (S&T) program is fundamental to maintaining aerospace dominance in the 21st century. We continue to invest in a broad and balanced set of technologies derived from basic research, applied research, and advanced technology development on a continuum of maturity levels from short- to long-term. This time-scaled approach keeps emerging capabilities in the pipeline and fosters revolutionary developments.

The Air Force S&T community is working closely with operators and strategic planners to explicitly link research activities with our core competencies, critical future capabilities, and future concepts of operation. This effort has produced S&T goals in the areas of time sensitive targeting; improved command, control, and information systems; survivability (defensive efforts); lethality and neutralization (offensive efforts); and improved power generation, propulsion, and vehicles. In accordance with the Fiscal Year 2001 National Defense Authorization Act, we are also conducting a major review of our S&T program to identify both short-term objectives and long-range challenges.

No matter how strong our commitment to S&T, however, our efforts will be jeopardized if we don't protect our developing technologies. We are taking aggressive measures to safeguard existing and emerging technologies from compromise that would degrade combat effectiveness, shorten the expected combat life of a system, or stall program development.

CONCLUSION

We have adapted to the new strategic environment by incorporating new technologies, operational concepts, and organizational structures—the definition of transformation. For the good of the Nation, we cannot afford to stop with the transformation we have already achieved. Given the increasing complexity of warfare and the access potential adversaries have to new technologies, we now need to move ahead even more quickly. If we emphasize those force elements that have the flexibility to respond to the new strategic challenge, we can realize order of magnitude increases in capability. For example, America can support the full spectrum of operations at lower cost in dollars and manpower by emphasizing stealth, precision standoff weapons, and information technologies that mark a qualitative shift in military operations. Those same forces have relevance across the entire spectrum of conflict. If we exploit the aerospace capabilities that have emerged since our current war plans were established, we may not be faced with having to shrink from our responsibilities as a global power. Capitalizing on America's asymmetric advantage—aerospace power—we can expand America's strategic options at less risk. However, there's a bill for this tremendous capability. We must fully fund our aerospace power force—the force that gives America a capability that is truly unique among nations.

ROADMAP TO THE FUTURE

In order to remain the world's preeminent aerospace force, we must continue our transformation and work through the financial hurdles before us. A strong economy has made retaining and recruiting an all-volunteer force extremely difficult, but we have taken significant steps to reduce the downward trends. The increasing cost of readiness (including operations and maintenance) is consuming the funds required to modernize our systems and our infrastructure. We have developed a responsible, time-phased plan to modernize our force without sacrificing readiness or capability goals. However, even if the plan is approved after Secretary Rumsfeld's review, we do not have the modernization funds to fully execute it. Finally, through constant innovation and adaptation, we are linking emerging technologies with our future concepts of operation in order to evolve our aerospace capabilities while providing the Nation the most effective return on its investments. Taking care of our people, improving readiness, and procuring upgraded and new, integrated systems are crucial to ensuring we can deliver rapid aerospace dominance well into the 21st century.

PEOPLE

Force structure drawdowns and a high demand for U.S. military presence around the globe have had a significant impact on our Total Force—active, Reserve, Guard,

civilians, and contractors. Last year, at any given time, an average of 13,000 Total Force members were deployed around the world. Another 76,000 people were stationed overseas on permanent assignment. Retaining our military people is the first step in maintaining our combat capability and readiness, and will help alleviate many of our current recruiting and training problems. We need help to ensure our civilian work force is properly sized and shaped. We also continue to address the quality of life and quality of service concerns of all our people by creating better living and working environments for them. Finally, we are developing leaders who understand the full spectrum of expeditionary and integrated operations and the importance of giving every member an equal opportunity to serve and succeed. All of these actions are crucial to sustaining the foundation of our force—Air Force people.

Retention

We are unique among the Services in that we are a retention-based force. We depend on retaining highly trained and skilled people to sustain our readiness posture for rapid global deployment. By meeting retention goals, we can reduce our current recruiting and training requirements, and build and maintain our technical expertise. However, we expect the economic climate will continue to make retaining our skilled enlisted and officer personnel difficult over the next several years. About 7 out of every 10 enlisted airmen will make a reenlistment decision between now and 2004. Exit surveys show the availability of civilian jobs as the primary reason our people decide to separate from the Air Force. To retain these people, we must continue to improve compensation; not only in terms of pay, but also by reimbursing the out-of-pocket expenses incurred during frequent moves, deployments, and other temporary duty. The viability of the all-volunteer force depends on military service remaining a competitive career option. We will continue to retain our people through quality of life initiatives.

In 2000, we held two retention summits chartered to identify the reasons people decide to leave the Air Force and to develop solutions to retain them. From the summit, we produced and are implementing 19 initiatives to improve retention, including establishing career assistance advisors at our bases to maximize the benefits of performance feedback sessions and provide selective reenlistment program counseling.

With respect to officer retention, we closely monitor the officer cumulative continuation rate (CCR), or the percentage of officers entering their 4th year of service (6 years for pilots and navigators) who will complete their 11th year of service given existing retention patterns. In fiscal year 2000, the pilot CCR dropped to 45 percent from the high of 87 percent in fiscal year 1995. Non-rated operations and mission support officer retention rates have also dropped over the past 2 years. In fact, retention rates have decreased for several high-tech specialties—developmental engineers, scientists, communication officers, and acquisition managers are in high demand. Conversely, navigator and air battle manager rates improved in fiscal year 2000, rising to 69 percent and 51 percent from last year's rates of 62 percent and 45 percent, respectively.

We aggressively use bonuses to retain our members. For example, a flexible aviation continuation pay (ACP) program is integral to our multi-faceted plan to retain pilots. Under a provision of the Fiscal Year 2000 National Defense Authorization Act (NDAA), we began offering ACP payments through 25 years of aviation service at up to \$25,000 per year, and expanded eligibility to pilots below the rank of brigadier general. This resulted in a substantial increase in additional years of service commitment. The fiscal year 2001 ACP program includes two enhancements for first-time eligible pilots: the up-front lump sum payment cap was raised from \$100,000 to \$150,000 and up-front payment options were expanded. These changes were made to enhance the attractiveness of longer-term agreements.

Seventy-six percent of our enlisted skills are now targeted with reenlistment bonuses, and we are considering bonuses for some non-rated line officer categories. The need to widen our bonus footprint, coupled with current below-goal retention rates, is strong evidence that the basic pay structure is too low. The addition of the officer and enlisted critical skills retention bonus of up to \$200,000 during a career, which was authorized in the fiscal year 2001 NDAA, should help retain those people with skill sets in high demand by the civilian sector. We have also targeted our enlisted members with those crucial skills by increasing special duty assignment pay to \$600 per month.

Our Guard and Reserve have also taken steps to address retention problems by authorizing special pay and enlistment bonuses for critical enlisted specialties, ACP for active Guard and Reserve pilots, and special salary rates for full-time Reserve component military technicians. Implementation of the EAF concept will also help

alleviate some of their retention challenges by providing advanced deployment notice to civilian employees.

Recruiting

We missed our enlisted recruiting goal only twice since the inception of the all-volunteer force in 1973: fiscal year 1979 and fiscal year 1999. In fiscal year 2000, we waged an all-out "war" to recruit America's best—and won. We exceeded our enlisted recruiting goal of 34,000 by almost 400 without lowering our standards. We still require 99 percent of our recruits to have high school diplomas, and nearly 73 percent of our recruits score in the top half of all scores on the Armed Forces Qualification Test. In addition, we brought 848 prior-service members back on Active Duty, compared to 601 in fiscal year 1999 and 196 in fiscal year 1998.

Successful recruiting means enlisting airmen whose aptitudes match the technical requirements we need. Although we met our overall recruiting goals in fiscal year 2000, we fell about 1,500 short of our goal of 12,428 recruits with mechanical aptitudes. In response, we are developing a targeted program to highlight the many opportunities we offer to mechanics, as well as a "prep school" to increase the number of airmen qualified to attend courses in areas such as jet engine repair and avionics maintenance. These efforts are paying off—through the first 4 months of fiscal year 2001 we have met or exceeded our monthly goal for mechanically skilled recruits.

As with our retention efforts, we are using bonuses to improve recruiting. An increase in the enlistment bonus to \$20,000 for our hard-to-fill critical skills positions proved successful—68 percent of our bonus-eligible recruits selected a 6-year initial enlistment in fiscal year 2000. We also introduced a \$5,000 "kicker" to encourage new recruits to enlist during our most difficult recruiting months: February, March, April, and May.

Additionally, we held a comprehensive review of our recruiting and accessions processes. One of the most important initiatives that came out of this review was to increase our recruiter force. Therefore, we augmented our permanent recruiters with temporary duty personnel for periods of 120 days. This action resulted in an extra 1,100 recruits during the spring and summer of 2000. We increased the number of recruiter authorizations from 1,209 to 1,450 in fiscal year 2000, and we project 1,650 recruiter authorizations by the end of 2001. The Active Duty draw-down has also created an additional recruiting challenge for our Guard and Reserve components. As a result, the Air Force Reserve is increasing its recruiting force in fiscal year 2001 by 50 recruiters (to 564), and the Air National Guard is adding 65 recruiters (to 413) over the next 3 years.

Officer recruiting is not immune to the economic factors affecting enlisted recruiting. As of March 2001, the Reserve Officer Training Corps (ROTC) anticipates shortfalls of 400 officers in fiscal year 2002 and 280 in fiscal year 2003 (against a yearly goal of 2,000). We are considering several initiatives to attract more candidates, including offering cadets contracts after their freshman year rather than waiting until the end of their sophomore year, as well as recommending legislation to permit an officer accession bonus and to increase enlisted commissioning opportunities. In fiscal year 2000, we achieved 97 percent of our line officer accession target, even though fiscal year 2000 production was 5 percent above fiscal year 1999 and 21 percent greater than fiscal year 1998.

Recruiting health-care professionals has also been challenging. Many medical, dental, nurse, and biomedical specialties are critically short. For example, only 80 percent of our clinical pharmacy positions are filled. In 2001, for the first time, we will be offering a \$10,000 accession bonus to pharmacists who enter Active Duty.

Finally, we launched a multi-faceted marketing campaign, including television and movie theater advertising. Our ads depict the teamwork, dedication, and technological sophistication that characterize the Air Force. The Air Force Reserve and Air National Guard also launched a national campaign that includes television, radio, and outdoor advertisements.

Civilian Workforce Shaping

In 1989, approximately 17 percent of our civilians were in their first 5 years of service. Today, that figure is less than 10 percent. In the next 5 years, more than 40 percent of our civilian career workforce will be eligible for optional or early retirement. Compounding this problem, the downsizing of the past decade has skewed the mix of civilian workforce skills. While we are meeting mission needs today, without the proper civilian force shaping tools, we risk not being ready to meet tomorrow's challenges.

We have developed several initiatives to address our civilian workforce concerns. These initiatives include finding new ways to attract and recruit civilian employees; developing streamlined, flexible, and expedited hiring processes; supporting pay

flexibility to better align salaries with those of private industry; and increasing the availability of student loan repayment programs.

We also realize that we must renew the mid-level civilian workforce to meet the demands of an increasingly technical force. We will accomplish this through job proficiency training, leadership development, academic courses, and retraining. Further, we believe that funding civilian tuition assistance programs, as we do for our military people, and having the flexibility to pay for job licenses and certifications, will help our shaping efforts.

However, we must also use separation management tools to create vacancies so the civilian work force is continuously refreshed with new talent and contains the right skills mix. These tools include pay comparability, and extending special voluntary separation incentive pay (VSIP) and voluntary early retirement authority (VERA) for workforce restructuring. We also need an incentive to provide employees the option to offset all or part of the early retirement penalty to their annuity through a lump-sum payment to the civil service retirement and disability fund.

Quality of Life

For the first time in 5 years, we are adding manpower and workplace environment to our core quality of life priorities. Updated wartime planning factors and real-world operations validated our increased manpower requirements. Meeting our existing mission requirements with our current end strength is wearing out our people. We need to increase our end strength by 12,000 personnel above our fiscal year 2000 level, primarily in the combat, combat support, low density/high demand, and high-tempo areas.

A good quality of life is central to attracting and retaining our people. The fiscal year 2001 NDAA provided a 3.7 percent pay raise, one-half percent above private sector wage growth, and a targeted pay raise for our mid-level enlisted members ranging from \$32 to \$58 per month. While these are positive developments, military pay, particularly for mid-grade NCOs and officers, remains below comparable private sector salaries. In fiscal year 2001, our members' out-of-pocket housing expenses will be reduced from 18.9 percent to 15 percent, but at significant cost to our budget. A goal of zero out-of-pocket housing costs by fiscal year 2005, as directed by the former Secretary of Defense, will be difficult to fund within current projections. To help reduce out-of-pocket moving expenses, the NDAA equalized dislocation allowances for our lower ranking enlisted force, and authorized advanced payment of temporary lodging expenses and a pet quarantine reimbursement up to \$275.

Providing our people with safe, affordable accommodations improves their quality of life and, in turn, increases retention. Our dormitory master plan will build or replace dormitory rooms throughout the Air Force. We continue to pursue a private room policy for our airmen. Currently, 86 percent of our unaccompanied airmen housed on base have a private room with a shared bath. We also plan to replace, improve, or privatize over 10,000 family housing units. In addition, ensuring our members have adequate officer and enlisted visiting quarters and temporary lodging facilities remains a high priority. Constructing and maintaining sufficient numbers of on-base facilities yields significant savings in moving and travel costs while aiding force protection.

Another important component of quality of life is health care. The year 2000 was a milestone year for our health-care program, with many changes taking effect in 2001. TRICARE was expanded to include 1.4 million Medicare-eligible beneficiaries, retirees, and their family members beginning in October 2001. By enrolling in Part B Medicare, they can now visit any civilian health-care provider and have TRICARE pay most, if not all, of what Medicare does not cover. Other legislation extends TRICARE Prime Remote to immediate Active Duty family members stationed in remote areas (i.e., areas not within 50 miles of a military treatment facility); eliminates TRICARE co-payments for Active Duty family members; establishes chiropractic care for Active Duty members; reduces the TRICARE catastrophic cap to \$3,000 per year; and improves claims processing.

Enhancing community and family programs is crucial to retention since 62 percent of our force is married. This year we created the Community Action Information Board (CAIB) to bring together senior leaders to review and resolve individual, family, and installation community issues impacting our readiness and quality of life. We recognize the economic benefits our members and their families receive from youth programs, family support centers, fitness centers, libraries and other recreational programs which support and enhance the sense of community. We also continue to support the commissary benefit as an important non-pay entitlement.

Even with the EAF, our tempo can make educational pursuits difficult. Our learning resource centers and distance learning initiatives address this situation by offer-

ing deployed personnel education and testing opportunities through CD-ROM and interactive television. We support lengthening the Montgomery GI Bill contribution period from 1 to 2 years in order to ease the financial burdens of new airmen. Additionally, we have joined with the other Services, the Department of Labor, and civilian licensing and certification agencies to promote the recognition of military training as creditable towards civilian licensing requirements.

Training

Training the world's best Air Force is challenging in today's rigorous, expeditionary environment. Recruits face a demanding basic training course, and newly commissioned officers and selected civilians attend the Aerospace Basic Course to establish a fundamental knowledge of aerospace power and the profession of arms. However, lower enlisted retention rates are increasing our training burden. Fewer experienced trainers are available to train entry-level personnel. Additionally, the increased number of accessions (due to lower retention) stress our training facilities and personnel. During accession surge periods, our technical training centers operate at over 100 percent capacity by triple-bunking students in two-person dorm rooms. Despite these challenges, our technical training schools are meeting their mission. By increasing our use of technology and streamlining training processes, we are producing fully qualified apprentices. Recognizing training as a continuous process, we are using emerging technologies to establish a training management system capable of documenting and delivering the right training throughout a member's career.

Equal Opportunity

We strive to build and maintain an environment that is free from unlawful discrimination and harassment and reflects the rich diversity of our Nation. Equal opportunity, diversity, and fair and equitable treatment of our people have evolved from law to a strategic readiness imperative. Ensuring that every airman is given equal access and equal opportunity to achieve his or her full potential is vital to our readiness equation. Creating and sustaining an environment where individuals are respected and valued is key to mission performance and force sustainment. These issues require constant attention and support. Accordingly, we are committed to attracting, recruiting, hiring, accessing, developing, managing, rewarding, and retaining a diverse and high-quality Air Force that reflects all segments of American society.

READINESS

Total Air Force readiness has declined 23 percentage points since 1996. We attribute this decay to the problems associated with supporting the oldest aircraft fleet in Air Force history; the inability to retain an experienced workforce; and constrained resources and spare parts. With recent financial assistance from the administration, Office of the Secretary of Defense (OSD), and Congress, we are turning our spare parts problems around. However, as our fighter, ISR, combat search and rescue, mobility, and tanker aircraft continue to age, they need more frequent and substantial repairs, driving up readiness costs. This, in turn, reduces the number of aircraft available for missions and creates higher demands on the remaining fleet. Reversing this trend will take additional funding and a concerted recapitalization effort. In addition, the maintenance tasks and materiel growth inherent in supporting our aging aircraft fleet have increased our depot workload. Limited depot infrastructure investment over the past decade, coupled with constrained funding, adds to our already significant challenges in meeting readiness requirements. We are also experiencing infrastructure shortfalls in our facilities (i.e., bases), vehicles and support equipment, and communications infrastructure. However, our environmental program remains on track. Overall, we are committed to improving readiness, but it must be in concert with our people, infrastructure, and modernization programs.

SPARE PARTS

Sufficient inventories of weapon system spare parts are crucial to mission readiness. Lack of spares puts a severe strain on the entire combat support system, creating increased workload for our logistics personnel and reducing the number of mission-capable aircraft available to our operational forces. When our logistics system suffers parts shortages, maintenance personnel must either cannibalize parts from other equipment or aircraft to serve immediate needs, or accept degraded readiness while they wait out long-delivery times for backordered parts.

Recent improvements in spare parts funding are turning this situation around. Through internal funding realignment, the administration, OSD and congressional plus-ups, we were able to spend an additional \$2 billion for spare parts over the

past 2 years. This helped replenish inventories drained during Operation Allied Force. During the summer 2000 program review, the DOD fully supported our efforts to fill shortfalls in the spare-parts pipeline which were impacting operational requirements. Additional administration and OSD support for fiscal year 2002 includes full funding of the flying hour program and our airlift readiness spares packages, and increased funding to reduce the spares repair backlog.

One of our greatest readiness challenges is managing the consequences of an unprecedented older aircraft fleet. Today, the average aircraft is approximately 22 years old. Even with currently programmed procurements, this figure will continue to rise, reaching nearly 30 within the next 15 years. Buying spare parts for aging aircraft is similar to buying them for aging vehicles. The older the vehicle, the more expensive the part due to obsolescence and a reduced vendor base. Maintaining an aging fleet with more expensive spare parts is one of the costs reflected in the increasing cost per flying hour. Over the past 5 years, our flying hours required for training and readiness have remained relatively constant, but the cost of executing our flying hour program has risen over 45 percent.

Facility Infrastructure

Our available resources do not cover the maintenance requirements of our facilities. Presently, we are able to sustain only day-to-day recurring maintenance and periodic system repairs on our real property, creating a backlog of required maintenance. The replacement or renovation of existing real property is now on a cycle exceeding 150 years, compared with the industry standard of 50 years. Military construction has also been reduced drastically since the mid-1980s (from the high of about \$1.8 billion in fiscal year 1986 to the current \$596 million in fiscal year 2001).

Reductions in Air Force manpower and force structure have also left us with too much infrastructure. As a result, we are required to spend scarce resources on unneeded facilities while struggling to maintain acceptable operational readiness levels. We must be allowed to close unnecessary installations and then reinvest the savings in Real Property Maintenance (RPM), base-operating support, family housing, and military construction.

Vehicles and Support Equipment

Over the past 8 years, the vehicle replacement program has been significantly underfunded. This situation has created approximately \$552 million in deferred vehicle requirements for more than 27,000 special-purpose, construction, tactical, and material-handling vehicles. While our major commands are pursuing temporary solutions, like general-purpose vehicle leasing, refurbishment programs, and reducing excess vehicle requirements wherever possible, failure to replace aging vehicles will directly impact our combat capability.

Our support equipment program is only 58 percent funded. This follows an historical trend of inadequate funding. We have about \$134 million in deferred funding for maintenance stands, aircraft de-icing trucks, munitions-handling equipment, military working dogs, and Harvest Eagle and Harvest Falcon equipment used to erect bare bases. Missions in the Balkans and Southwest Asia have exacerbated equipment shortfalls. Addressing this funding gap will improve our readiness.

Communications Infrastructure

Information technology (IT) advancements over the past decade have revolutionized aerospace power. From desktop computing to near-instantaneous worldwide access to information, our communications technologies enable information dominance and create "actionable knowledge" for our commanders. The ability of forward-deployed commanders to rapidly and reliably reach back to a large number of combat support capabilities at home base, streamlines expeditionary operations by reducing airlift requirements and the size of our deployed footprint. A vital piece of our "infostructure" is our global information grid, an interconnected, network-centric information environment that provides information on-demand to our policymakers, warfighters, and supporting personnel. This infostructure gives us the means to meet our future information requirements.

Environmental Cleanup

Our environmental program stands on four main pillars: environmental compliance, pollution prevention, environmental restoration, and resource conservation. The goal at our active installations is to have cleanup remedies in place for all our high-risk sites by 2007 and for all sites by 2014.

The environmental program for our closed and closing bases focuses on expedient cleanups that stress public health, responsible environmental stewardship, and the transfer of property for redevelopment. We continue to streamline processes, reduce costs, and promote community participation in decision-making. We are on target

to complete all of our environmental cleanups by 2005, except for McClellan AFB, CA, which is targeted for 2015. Still, we require continuing investment to ensure properties are ready for permanent transfer to civil authorities.

MODERNIZATION

Our modernization plan includes retiring the C-141 and procuring the C-17, buying our future air superiority fighters, considering tanker replacements, upgrading conventional bombers and precision-guided munitions (PGMs), and developing new C² and ISR systems. An important step in achieving these priorities involves sustaining and modernizing relevant, capable space forces, with emphasis on the development of the Space Based Infrared System (SBIRS), the Global Positioning System (GPS), the Evolved Expendable Launch Vehicle (EELV), and secure communication satellites. We must also upgrade our space launch ranges and satellite control network. The next several pages describe our modernization programs aligned under each of our core competencies.

Aerospace Superiority

Aerospace superiority is the ability to control the entire vertical dimension, from the surface of the Earth to the highest orbiting satellite, so the joint force has freedom from attack and freedom to attack. Aerospace superiority is the crucial first step in achieving rapid aerospace dominance. In the 21st century, aerospace superiority depends on strike and defensive platforms, such as F-22 and the Airborne Laser (ABL), and ISR platforms, such as Global Hawk and SBIRS, seamlessly integrated through real-time information sharing and appropriate space control measures.

The F-22, with its revolutionary combination of stealth, supercruise (i.e., supersonic-cruise without afterburner), maneuverability, and integrated avionics, will dominate the skies. The F-22's advanced capabilities will allow it to penetrate an adversary's airspace even if anti-access assets are in place, destroying the most critical air defense capabilities, thus permitting follow-on forces freedom of movement.

Additionally, the F-22 will serve as the enabling platform for the Joint Strike Fighter (JSF) and other systems engaging enemy ground targets. In 2000, during continued envelope expansion flight testing, the F-22 successfully launched an Advanced Medium-Range Air-to-Air Missile (AMRAAM) and an AIM-9 infrared-guided missile from its internal side weapons bay, and began testing Block 3.0 avionics software.

The F-22 has successfully met all congressionally mandated criteria necessary to enter low-rate initial production (LRIP) following Defense Acquisition Board approval. Entering operational service in 2005, this leap in technology is crucial to preserving the Nation's most important military advantage for future warfighters: the capability to rapidly obtain and maintain aerospace dominance.

The Airborne Laser (ABL) is a transformational boost-phase intercept weapon system that will contribute significantly to the missile defense architecture. In January 2000, we began modifying a Boeing 747 to become the first of two ABL prototypes. This prototype successfully completed critical design review in April 2000. With the modifications completed in the third quarter of fiscal year 2001, ABL is progressing toward a demonstration against a theater ballistic missile. This revolutionary capability will bring equally revolutionary changes in warfighting.

The Space Based Laser (SBL) has the potential to provide continuous boost-phase intercept for ballistic missile defense. To pursue this capability, the SBL integrated flight experiment (IFX) project will determine the feasibility and utility of this approach, focusing on risk reduction, the sustainment of critical technologies, and system architecture studies. The program is currently making excellent progress in high-energy laser beam control; acquisition, tracking and pointing technologies; and overall systems integration.

The Space Based Infrared System (SBIRS) significantly improves on the missile warning capability of the 1993 Talon Shield upgrade to the Defense Support Program (DSP) missile detection and warning network of satellites. DSP has provided strategic missile warning for North America for nearly 30 years. Beginning in 1993, the DSP project upgraded processing techniques to provide a theater missile warning capability that includes timely and accurate detection and tracking of tactical ballistic missiles and other theater threats. SBIRS significantly improves on the missile warning capability of Talon Shield by consolidating the Nation's infrared detection systems into a single architecture, meeting our security requirements for missile warning, missile defense, technical intelligence, and battlespace characterization.

SBIRS High, SBIRS Low, and DSP, and will operate through a consolidated ground segment. DSP currently employs satellites to provide early detection and

warning of missile launches and nuclear explosions to the National Command Authorities. The last three DSP satellites will be placed into orbit between fiscal year 2001 and fiscal year 2003, and subsequently operated from the new SBIRS mission control station. The SBIRS High component, currently in engineering and manufacturing development (EMD), is on track for the first delivery of a highly elliptical orbit (HEO) sensor in fiscal year 2002 and the first launch of a satellite into geosynchronous orbit (GEO) in fiscal year 2005. The SBIRS Low component, now in the program definition/risk reduction phase, consists of low earth orbiting (LEO) satellites with the first launch planned for 2006. We are working hand-in-hand with the Ballistic Missile Defense Office to make the SBIRS program a success. In total, we will operate 2 SBIRS HEO, 4 GEO, and between 20 and 30 LEO satellites.

Miniature Satellites

On July 19, 2000, the Air Force Research Laboratory launched MightySat II, a test satellite weighing only 266 pounds. The MightySat series of experiments are designed to quickly and inexpensively explore, demonstrate, and transition space technologies from the drawing board to operational use. MightySat II demonstrates advanced technologies for hyperspectral remote sensing and on-board processing that could eventually help military commanders detect and identify hidden targets. The MightySat series are building blocks for more advanced satellite concepts, such as TechSat-21. This concept will employ three micro-satellites flying in formation to act as an integrated "virtual" satellite, enabling revolutionary remote sensing capabilities such as ground moving target identification.

Assured Access to Space

Achieving and maintaining superiority throughout the entire aerospace continuum requires an operational space launch and maneuver capability that can deploy to orbit with the same speed and flexibility as our other aerospace forces. The Evolved Expendable Launch Vehicle (EELV) will soon replace the current Titan, Atlas, and Delta launch vehicles to ensure America's spacelift capability until 2020. It consists of two independent launch systems: the Boeing Delta IV and Lockheed Martin Atlas V. The first EELV launch is scheduled for 2002. Our EELV partnership strategy with industry will meet military, government, and commercial spacelift requirements at 25 percent to 50 percent lower cost than current systems. In the future, we envision reusable launch vehicles that will provide launch on demand, high sortie rates, reduced operations costs, and increased operational flexibility in support of space mission areas.

Space Control

We are committed to exploring innovative ways of modernizing space-based technologies. Utilizing residual resources from the midcourse space experiment (MSX) satellite, Air Force Space Command (AFSPC) transitioned this advanced concept technology demonstration into a space-based space surveillance sensor. The Space Based Visible (SBV) sensor provides critical positional data on orbiting objects to ensure battlespace awareness.

During the past year, we activated the first-ever space control unit—the 76th Space Control Squadron at Peterson AFB, Colorado. The 76th SPCS is an offensive and defensive counterspace technology unit responsible for exploring emerging space control capabilities, including concepts of counter-communications and counter-surveillance/reconnaissance, and the development of a satellite attack, threat detection, and reporting architecture.

Combat Search and Rescue

Combat search and rescue (CSAR) forces, identified by DOD as low density/high demand (LD/HD) assets, recover downed combat aircrews and other isolated people from hostile territory and return them to friendly control. The age of our CSAR platforms, and their lack of compatibility with our advances in strike, C², ISR, communications and other systems, jeopardize our ability to fulfill our operational commitments beginning in 2010. For example, the A-10 aircraft does not have the latest airborne receivers required to perform the on-scene command role during combat rescue missions. In 2010, our HH-60s (search and rescue helicopters) will reach the end of their service life and require either a service life extension program (SLEP) or replacement. Our near-term enhancements include equipping HH-60Gs with over-the-horizon data receivers and improved defensive systems. We are also improving our CSAR force structure by converting 10 WC-130Hs (weather observation aircraft) into HC-130s (rescue/tanker transports) and transferring eight HH-60s and five HC-130s from the Reserve to the active force. We have established the new combat rescue officer (CRO) career specialty to improve the leadership of the CSAR

mission area. The first CRO commanded pararescue squadron will stand up in May 2001.

Information Superiority

Information superiority, like aerospace superiority, means our information systems are free from attack while we have freedom to attack an adversary's information systems. Information superiority enables us to provide tailored, accurate targeting information from a sensor to a shooter within minutes. It assures U.S. and allied forces have a clear picture of the battlespace and can operate freely in the information domain while denying the enemy the same. Information superiority includes the ability to gain, exploit, attack, and defend information. Integral elements include capabilities in information-in-warfare (e.g., ISR, weather, communications) and information warfare (e.g., electronic warfare, psychological operations, computer network attack and defense).

Command and Control

Our operational and tactical command and control (C²) airborne platforms and ground systems organize and direct ISR efforts and tactical forces to successfully apply combat power. Our C² assets include the aerospace operations center (AOC) with its decentralized component control reporting centers (CRC), the Airborne Warning and Control System (AWACS), and the Joint Surveillance Target Attack Radar System (JSTARS).

As the primary element of the Theater Air Control System (TACS), the AOC is responsible for planning, executing, and assessing the full range of aerospace operations. By fusing the data from a vast array of C² and sensor systems, the AOC creates a comprehensive awareness of the battlespace so the Joint Force Air Component Commander (JFACC) can task and execute the most complex aerospace operations across the entire spectrum of conflict.

Especially significant among these operations are time sensitive targeting, which provides rapid reaction to the threat, and theater battle management, which blends C², rapid intelligence collection, analysis, and dissemination with positive control of airspace and the tasking of combat forces to coordinate the entire air battle with joint and coalition partners and component commanders. We have recently designated the AOC as a "weapon system" and are working on efforts to standardize its capabilities. Our continued efforts in equipment baselining, personnel training, and documentation are the precursors to a full AOC system modernization effort. The emergence of the AOC as a fully developed, standardized weapon system will revolutionize the operational level of warfare.

The CRC is the JFACC's ground tactical execution node for C² and battle management. It provides wide-area surveillance, theater air defense, identification, data link management, and air battle execution. The current system was developed in the 1970s and must be replaced. The CRC replacement, the Battle Control System, will exceed year 2010 requirements for time sensitive targeting, open system architecture, small deployment footprint, remote operations, multi-sensor fusion, and AEF responsiveness.

The Theater Battle Management Core Systems (TBMCS) is an integrated, automated C² and decision support tool that offers the senior aerospace commander and subordinate staffs a single point of access to real- or near-real-time information necessary for the execution of higher headquarters taskings. TBMCS will support a full range of functions including threat assessment, target selection, mission execution, battle damage assessment, resource management, time sensitive target identification and prosecution, and defensive planning.

Communication

Information superiority, and by extension, all our core competencies depend on the availability of a robust, worldwide communications capability. Unfortunately, our military satellite communication (MILSATCOM) systems can not fully keep up with the growth of theater requirements. Over the next 10 years, our need for secure communications is expected to increase 15-fold over current capacity, while wideband requirements are projected to soar to 20 times the current capacity. In an environment of extremely high worldwide demand and competition, commercial providers simply cannot supply us with the protected bandwidth, security, or coverage necessary to fully support military operations.

MILSATCOM systems, notably the Defense Satellite Communications System (DSCS) and the Military Strategic and Tactical Relay System (MILSTAR), support contingency and ongoing operations. The first DSCS SLEP satellite, launched in January 2000, provides users a 200 percent increase in military wideband communications capacity compared to legacy DSCS III satellites. It also increases the overall reliability of the military wideband constellation. Early in 2001, the MILSTAR

constellation received a third operational satellite, to provide jam-resistant communications for tactical operations. Furthermore, a complete modernization of protected communications (advanced extremely high frequency) and wideband communications (advanced wideband) is underway. These are positive steps toward ensuring space superiority and information superiority today and in the future.

While the long-haul communications provided by satellites is crucial to operations, transporting information to in-garrison and deployed units is equally vital. Theater deployable communications provide lightweight multiband satellite terminals that allow our deployed forces to reach back on the Global Command and Control System-Air Force (GCCS-AF) via the Combat Information Transport System—our high-capacity fiber-optic backbone. This capability allows combat forces to quickly deploy with a smaller support structure. We are also implementing innovative emerging technologies to maximize bandwidth availability. This is especially critical given the commercial expansion into the frequency spectrum used by the military.

Information Warfare

We have fielded eight information warfare flights (IWF) to date, providing combat commanders with full-spectrum information warfare (IW) planning for offensive, defensive, kinetic, and non-kinetic applications. We plan to field at least one additional IWF to support U.S. Special Operations Command. Each IWF integrates offensive counterinformation, defensive counterinformation, and information-in-warfare functions to gain, exploit, attack, and defend both information and information systems. We recognize the potency of psychological operations and, therefore, include it in our strategic planning as part of our IW capabilities.

Intelligence, Surveillance, and Reconnaissance

Currently, our limited numbers of airborne ISR systems are in extremely high demand. The RC-135 Rivet Joint, U-2, and Predator UAV were indispensable during Operation Allied Force, providing real-time PGM target data, threat warning, and battle damage assessment. UAV systems, such as Global Hawk and Predator, promise to expand our ISR collection capability while reducing the need to place our people in harm's way.

Global Hawk successfully completed a military utility assessment and is poised to move forward as a formal Air Force acquisition program with the delivery of production vehicles in fiscal year 2003. The Predator continued to demonstrate impressive expandability with the integration of a laser illuminator for PGMs and the recent successful launch of a Hellfire-C missile against a ground target. Additionally, we are nearing completion of a major upgrade to the U-2's sensors, cockpit, defensive, and power systems.

Space-Based Radar Capability

We are evolving information superiority assets into space. New sources and methods of space-based ISR are being explored to provide nearly continuous overflight of enemy targets to complement airborne and ground-based sensor platforms. We are partnering with other Services, agencies, and the National Reconnaissance Office (NRO) to develop a roadmap for future space-based radar (SBR) capabilities. SBR is a pioneering approach to providing near-continuous, worldwide surveillance that would complement JSTARS and other ground moving target indication and imagery systems. SBR capability would skip a generation of sensor technology to provide precision weapons data and a nearly continuous deep, denied-area look at ground moving targets. Furthermore, as a space-based asset, SBR would not be limited by overflight restrictions, basing issues, lengthy personnel deployments, crew fatigue, or terrain masking. From a collection perspective, SBR would move us to the ultimate high-ground.

Joint Surveillance Target Attack Radar System

The JSTARS provides battle management, C², and ground moving-target detection. We are replacing the on-board computers with commercial-off-the-shelf equipment by 2005 under the JSTARS Computer Replacement Program (CRP). The CRP is the foundation of all JSTARS communications and sensor upgrades, and should reduce life-cycle costs and minimize the number of obsolete parts. However, due to fiscal constraints, we are enhancing only 2/3 of the fleet with the capacity to simultaneously transmit voice and data through beyond-line-of-sight satellite communications by 2005. Finally, the multi-platform Radar Technology Insertion Program (RTIP) will replace the current JSTARS radar with an advanced electronically scanned array radar that has five to ten times the air-to-ground surveillance capability, reduces target revisit times, improves moving-target track capability, and enhances radar resolution.

Airborne Warning and Control System

The AWACS remains the premier air battle management and wide-area surveillance platform in the world. Still, aging aircraft issues, obsolete technologies, and the proliferation of advanced adversary systems necessitate several upgrade programs. An improved radar system will become operational this year, with fully upgraded capability slated for fiscal year 2005. The next computer and display upgrade will replace the 1970 vintage processors with an open architecture system. Finally, a satellite communications access program will provide improved connectivity with regional and national C² centers.

Global Access, Navigation, and Safety

In 1996, we began the most comprehensive avionics modernization effort in our history—the Global Access, Navigation, and Safety (GANS) program. It comprises an unparalleled avionics procurement and installation effort to update the navigation and safety equipment in our aircraft and in many ground systems. GANS includes the Joint Precision Approach and Landing System; the Air Traffic Control and Landing System; modernization of our Global Air Traffic Management (GATM) capabilities; and updated avionics to include navigation, safety, and installation of Global Positioning System (GPS) capability. In May 2000, GPS selective availability was turned off, thereby providing the same accuracy to civil and military users. This increased accuracy will significantly enhance the capabilities of systems using GPS. In 2000, we built a strategic GANS implementation plan to synchronize our efforts with those of the Federal Aviation Administration (FAA) and International Civil Aviation Organization (ICAO). In the future, GANS will define the operational requirements for upgrading all our ground and air traffic management systems to preserve unimpeded worldwide operations within domestic and international airspace systems.

We project that more than 99 percent of our aircraft will complete the congressionally mandated GPS upgrade by the 2005 deadline. Additionally, through our GPS Modernization/Navigation Warfare (NavWar) Program, we began development of navigation warfare upgrades that will be fielded in GPS ground and space segments beginning in fiscal year 2003. These and future upgrades will allow us to better protect the ability of American and allied forces to employ GPS on the battlefield while denying it to our adversaries and minimizing potential impacts to civilian users.

Precision Engagement

Operation Allied Force demonstrated the need to strike targets in adverse weather conditions with precision. Our new generation of guided weapons couples GPS with an inertial navigation system to put bombs precisely on targets, day or night, in nearly all weather conditions. Weapons with this capability, such as the Joint Air-to-Surface Standoff Missile (JASSM), Joint Standoff Weapon (JSOW), Joint Direct Attack Munition (JDAM), and Wind Corrected Munitions Dispenser (WCMD) are among our high-priority precision engagement programs.

JASSM is a precise, stealthy, standoff missile that will enable us to destroy heavily defended, hardened, fixed, and relocatable targets. As a result of acquisition reform initiatives, JASSM will be delivered below the objective unit price of \$400K, after a development period that will be 35 percent shorter than comparable missile programs. JASSM is currently undergoing flight tests with production deliveries scheduled to begin in 2003.

JSOW is an accurate, adverse-weather, unpowered, glide munition. We are currently procuring two variants, the AGM-154A and AGM-154B, which are capable of destroying soft and armored targets at ranges of up to 40 nautical miles.

JDAM employs GPS guidance, incorporated in a tail kit, to deliver general-purpose or penetration warheads in adverse weather with near precision. We will use JDAM on multiple platforms to destroy high-priority, fixed, and relocatable targets. The first operational use of a 2,000-pound JDAM was from a B-2 during the first night of Operation Allied Force.

We are currently developing a MK-82 (500-pound) JDAM—a small bomb that will multiply kills per sortie by increasing the number of PGMs that can be carried. For example, the same B-2 that carried up to 16 2,000-pound JDAMs in Operation Allied Force will now be able to carry up to 80 500-pound JDAMs. This 500-pound JDAM capability, planned for initial deployment in fiscal year 2004, is the first step in the Air Force's transition to miniature munitions.

WCMD has an inertial-guided tail kit that enables us to accurately deliver the Combined Effects Munition, Sensor Fuzed Weapon, and the Gator Mine Dispenser from medium to high altitude in adverse weather. WCMD-equipped weapons became operational in late 2000.

In summary, munitions recapitalization is one of our top priorities. A decade of high operations tempo has depleted our large Cold War Reserve munition stockpiles. Acquisition of JDAM, JASSM, JSOW, and WCMD will increase PGM capabilities over the next few years; however, shortages of legacy munitions and consumable munitions items (e.g., bomb bodies, rockets, chaff, flares, training ammunition, and practice bombs) will continue to hamper training and operations.

Global Attack

Global Attack is the ability to engage targets anywhere, anytime. Global attack programs include the development of the Joint Strike Fighter (JSF), improvements to our legacy fighters, and the modernization of the B-1, B-2, and B-52 bombers with PGM capabilities. Additionally, modernization of strategic platforms such as the Minuteman III, the Air-Launched Cruise Missile, and the Advanced Cruise Missile ensures the viability of two legs of the nuclear triad.

Joint Strike Fighter

The Joint Strike Fighter (JSF) program will develop and field an affordable, lethal, survivable, and highly common family of stealthy, next-generation, multi-role, strike-fighter aircraft for the Air Force, Navy, Marine Corps, and our allies. It will provide a 24-hour, adverse-weather, precision-engagement capability not provided by our legacy systems. The JSF would help us limit our aging fleet problems. With a set of fully validated and affordable joint operational requirements in place, the competing contractors are completing the concept demonstration phase. The EMD phase is expected to begin in the fall of 2001. Partner countries will share the cost of JSF development, including the United Kingdom, which signed an agreement in January to contribute \$2 billion to the program. Several parallel negotiations are underway with other potential international partners.

Legacy Fighter Modernization

Our legacy fighters, including the F-15, F-16, and A-10, provide a potent mix of air-to-air and air-to-surface capability. The recent addition of GPS-guided PGMs on the F-117 gave it an adverse-weather capability. However, these aging platforms are growing more expensive to maintain and operate, and their combat effectiveness is expected to eventually decline as projected surface-to-air and air-to-air threats appear. The introduction of the stealthy F-22 and JSF will maintain America's technological advantage, ensuring the ability to defeat emerging threats while replacing aging force structure with modern combat systems.

One of our Guard and Reserve's top modernization priorities is incorporating precision targeting pods into their F-16 aircraft. From 1998 through 2000, we outfitted all of our Reserve units and selected Guard units with Litening II pods. This acquisition gave the Guard and Reserve's F-16s a critical precision strike capability while moving them closer to the configuration of the active F-16 force. Beginning in fiscal year 2001, the Guard will join with the active force in procuring the Advanced Targeting Pod (ATP). Collaborative programs between our active and Reserve components increase our overall procurement flexibility and close the gap in combat capability.

Bomber Modernization

Our bomber modernization efforts will continue to increase the lethality and survivability of our bomber force by enhancing precision strike and electronic combat capabilities. We are applying the lessons learned from Operation Allied Force by enhancing the flexible targeting and electronic connectivity of the B-2 using electronic data-link and UHF satellite communications. We are committed to integrating the MK-82 500-pound JDAM into the B-2, enabling it to strike up to 80 targets per sortie. Further, we are fielding the MK-84 2,000-pound JDAM on the B-1 and developing the capacity for both the B-1 and the B-52 to deliver JSOW, JASSM, and WCMD. Communications, avionics, situational awareness, electronic countermeasures, and defensive system upgrades would also improve bomber effectiveness.

Intercontinental Ballistic Missiles

Ongoing modernization of the Minuteman III (MM III) intercontinental ballistic missile (ICBM) force and a clear policy decision regarding the future of the Peacekeeper (PK) ICBM are crucial to the viability of ICBMs through 2020. For example, we could dismantle our PK ICBMs and then retrofit up to 350 MM IIIs with warheads currently on PKs to avoid a costly life-extension program on the Minuteman system. This replacement effort would ensure that our newest warhead, with the most modern safety features, remains part of the ICBM force. However, continued delays in START II Treaty ratification, and the resultant delay in a PK deactivation

decision, make it difficult to implement this program and are causing increased maintenance challenges that could eventually cause degradation of our ICBM force.

Rapid Global Mobility

Rapid Global Mobility ensures the Nation has the global reach to respond quickly and decisively anywhere in the world. As the number of forward-deployed forces has declined, the need for immediate response to overseas events has risen. Airlift and tanker aircraft give the United States the ability to rapidly reach out and influence events around the world. Yet, some of these platforms are reaching the end of their service life. To prepare for the future, the Mobility Requirements Study (MRS-05) and Tanker Requirements Study (TRS-05) were commissioned to determine long-term military airlift and aerial refueling requirements. MRS-05 ascertained the mobility requirements to support the Nation's military needs with moderate risk. Additionally, the TRS-05, baselined from MRS-05, will inform our decision-makers on the number of tankers needed to carry out future military operations. The KC-135 fleet now averages about 40 years old, and operations and support costs are escalating as structural fatigue, corrosion, systems supportability, and technical obsolescence take their toll. The KC-135 Economic Service Life (ESL) Study was completed in December 2000. This study provided specific KC-135 milestones, as well as information on projected sustainment costs and operational availability. In fiscal year 2001, using the KC-135 ESL study and TRS-05 as baselines, an aerial refueling analysis of alternatives will examine options and timing for replacing the aging KC-135.

The procurement of the full complement of C-17s and the continued modernization of the C-5, C-130, KC-10, and KC-135 fleets will enhance the viability of our mobility forces. Extensive efforts to modernize the C-5's avionics and propulsion systems should keep this aging platform operational for the future.

Modernization of the C-130 fleet (for intratheater airlift) is proceeding with a two-pronged approach. We are procuring new C-130Js to replace 150 of our most worn-out 1960s-era C-130E combat delivery aircraft. The C-130J provides increased range, performance, and cargo capacity compared with the current C-130E/Hs. The remainder of our C-130 fleet will undergo an avionics modernization program (AMP) modification. AMP includes state-of-the-art avionics that will eliminate the need for a navigator and will increase reliability, maintainability, and sustainability. The C-130 AMP modification will make the aircraft compliant with GATM standards and navigational safety requirements.

The Air Force has begun a large aircraft infrared countermeasures (LAIRCM) initiative to counter increasingly prolific man-portable air defense systems (MANPADS). LAIRCM will use state-of-the-art technology to provide active defenses for airlift- and tanker-sized aircraft against widely deployed shoulder-launched surface-to-air missiles.

LAIRCM will build on existing systems designed for helicopters and small, fixed-wing aircraft. It will add new missile warning and tracking systems to locate and direct a laser at an incoming missile. Operational capability is expected on the first C-17s in fiscal year 2004. Additional airlift and tanker aircraft will be outfitted with this system in the near future.

Rapid Global Mobility is dependent upon the Tunner 60K mobility aircraft loader. It is essential for expediting onload and offload and maximizing throughput at any location. The next generation small loader (NGSL), a replacement for existing 25K loaders and wide-body elevator loaders, will provide the versatility to load wide-body commercial aircraft and support mobility operations at forward bases.

Integrated Flight Management Modernization

Air Mobility Command's (AMC) Mobility 2000 (M2K) program is a comprehensive systems integration and C² architecture modernization initiative to increase the efficiency and responsiveness of airlift and air refueling operations. M2K will revolutionize AMC's C² data flow and connectivity, data processing, database management, and information display capabilities. By leveraging GATM system installation and digital datalink technologies, AMC will realize near-real-time global, end-to-end data connectivity between the Tanker Airlift Control Center and all AMC mission aircraft. The implementation of M2K programs began in 2000 and will continue into 2006.

Spacelift Range Modernization

The Spacelift Range System (SLRS) modernization program is replacing aging and non-supportable equipment; using automation to improve reliability and efficiency; reducing the cost of operations; and standardizing equipment on the eastern and western launch ranges. To date, the completion of new downrange satellite communication links, a new fiber-optic network, and new range scheduling systems are

providing government and commercial users more flexibility at the spacelift ranges. The congressionally directed National Launch Capabilities Study concluded that once completed, the SLRS modernization program, coupled with the EELV program, would meet the future launch demands of national security, civil, and commercial payloads.

The White House-led Interagency Working Group on the future utilization of U.S. space launch bases and ranges developed a strategic direction for the spacelift ranges. The Air Force was instrumental in shaping that strategic direction as well as the findings and conclusions contained in the Group's report. Through this effort, we have been expanding and formalizing partnerships with states, spaceports, and the Departments of Transportation and Commerce to better consider the spacelift requirements for civil and commercial launches while ensuring our capability to meet national security requirements now and in the future. At the same time, we are examining options for the use of non-Federal funding to improve the space launch ranges.

CV-22

The CV-22 is our designation for the special operations variant of the V-22 Osprey—a vertical/short-takeoff and landing airplane designed for long-range, rapid penetration of denied areas in adverse weather and low visibility. With twice the range and speed of a conventional helicopter and its state-of-the-art avionics system, the CV-22 will be able to complete most of its missions under the cover of darkness without being detected. We will use the CV-22 to infiltrate, exfiltrate, and resupply special operations forces and to augment personnel recovery forces when needed. The CV-22 is currently in the EMD phase with two test vehicles designated for flight tests through 2003.

Agile Combat Support

The goal of Agile Combat Support (ACS) is to improve the responsiveness, deployability, and sustainability of combat aerospace forces. Our four basic objectives are to become more rapidly deployable; develop a more responsive planning and execution capability; improve agile combat support C²; and develop an agile, responsive, and survivable sustainment capability. We are making gains in the process of right-sizing deployment teams so they are postured better for expeditionary needs. We have developed expeditionary site planning tools that help tailor our deployment capability based on assets prepositioned in the forward theater. We are gradually introducing bare base assets and other types of support equipment into our inventory. We've invested in infrastructure and prepositioning to improve the reception and beddown capabilities of our bomber forward-operating locations. We have fielded an integrated deployment system at all of our wings that improves the responsiveness of our deployment process. Our information technologies, such as the virtual logistics suite hosted on the Air Force Portal, will help provide real-time situational awareness for ACS command and control.

Through efforts like our logistics review and logistics transformation initiatives, we are reengineering our processes to achieve an agile, effective, well-integrated logistics chain that is responsive to EAF requirements. These are all examples of initiatives that will help achieve our four ACS objectives; however, our ACS capability must be improved even more to fully support our EAF vision. For example, we need to fix readiness shortfalls in key logistics resources including people, skills, spares, munitions, bare base assets, and vehicles. We need to improve our capability to rapidly develop deployment and sustainment plans for fast-breaking contingencies. Finally, we are making enhancements to our ACS command and control capability to make it more responsive, better integrated, and sufficiently robust to support EAF needs. These agile combat support initiatives are crucial to sustaining current and future combat operations.

Aircrew Training Requirements

We are actively updating the way we train. The Joint Primary Aircraft Training System (JPATS), including the T-6A aircraft, will replace the Air Force T-37 and the Navy T-34 primary trainers and their associated ground-based training systems beginning in June 2001 at Moody AFB, GA. We will continue to upgrade the T-38 advanced trainer aircraft with new avionics representative of current fighter systems while modernizing the propulsion system to improve engine reliability, safety, efficiency, and performance. Finally, we are making significant strides in developing simulated environments that produce training effects comparable to authentic environments. Our groundbreaking distributed mission training (DMT) system seamlessly links aircrew training devices at diverse locations, allowing aircrews to train as they fight.

Ranges

Ranges provide the critical airspace we need to test and train on our weapon systems. As modern aircraft continue to fly faster and deliver munitions from a greater distance, our ranges and associated test and training systems must evolve to meet our changing needs. We will balance our need to test and train with our responsibilities to the public and the environment. We are completing modifications to our range and airspace structure that will significantly enhance local training for our forces at Mountain Home AFB, ID, Dyess AFB, TX, and Barksdale AFB, LA. We are also working to further advance the integration of space and information operations into our ranges. This includes capitalizing on a common infrastructure across the test and training spectrum.

INNOVATION AND ADAPTATION

We have a proud heritage of innovation and adaptation. We are carefully linking emerging technologies with our future concepts of operation to evolve our aerospace core capabilities while providing the Nation the most effective return on its investments.

Experimentation and Wargames

We conduct experiments and wargames to evaluate near- and far-term aerospace capabilities and operational concepts. Joint Expeditionary Force Experiment (JEFX) 2000, conducted at various locations throughout the U.S. in September, focused on ways to integrate support functions into expeditionary operations and technologies to conduct time sensitive targeting. The wargame Global Engagement (GE) is held every other year to explore the potential capabilities of joint aerospace power and alternative force structures 10 to 15 years into the future. In June 2000, GE-V explored operational concepts and alternative force structures designed to deny and degrade an adversary's strategic decision-making ability and accelerate the transition from halt to win. GE-V also demonstrated aerospace power's unique capability to ensure access to operational areas where the enemy employs robust anti-access strategies. We are currently conducting a year-long analysis of GE-V in areas such as time sensitive targeting, space control, information operations, and forward logistics support. During odd-numbered years, we conduct an aerospace future capabilities wargame that takes a longer view, striving to shape our decisions and strategic direction by testing alternative concepts, systems, and force structures that may appear 20 to 25 years into the future. These wargames have produced new aerospace concepts, such as standoff warfare and reach-forward C² capability, which continue to mature through follow-up analysis and subsequent wargames.

Advanced Concept Technology Demonstrations

Advanced concept technology demonstrations (ACTDs) marry new operational concepts with mature technologies in order to meet warfighter needs in 2 to 4 years at a reduced cost. The high altitude UAV ACTD, Global Hawk, which has successfully transitioned to a formal acquisition program, is targeted for accelerated production and is expected to provide a follow-on capability for the U-2. The Miniature Air Launched Decoy (MALD), another ACTD system scheduled to enter production in fiscal year 2001, will augment our electronic warfare capability to protect valuable strike packages.

Battlelabs

Since their inception in 1997, the battlelabs have developed over 100 initiatives, including the application of commercial scheduling software for the Air Force Satellite Control Network, telecommunications firewalls for base phone systems, and the use of speech recognition to reduce mission planning time. The recently commissioned Air Mobility Battlelab joined the ranks of the Air Expeditionary Force Battlelab, Command and Control Battlelab, Force Protection Battlelab, Information Warfare Battlelab, Space Battlelab, and Unmanned Aerial Vehicle Battlelab, with a charter to rapidly identify and assess innovative operational and logistics concepts.

Joint Test and Evaluation

The Air Force plans to remain at the forefront of the joint test and evaluation (JT&E) process. JT&E programs are a means to bring two or more of the Services together to evaluate systems interoperability under realistic conditions. We are the lead service on five JT&Es in the areas of close air support; joint command, control, ISR sensor management techniques; cruise missile defense capability; GPS vulnerabilities; and electronic warfare in joint operations.

Conclusion

Our future hinges on continued advances in people, readiness, and modernization programs. Retention and recruitment of people will stay challenging in the near-term, but we will remain focused on the quality of life of our members. Similarly, we are concerned about readiness, but until we solve our aging aircraft troubles, improving our readiness will remain difficult. We believe we have developed a sound recapitalization plan to address our aging aircraft problem, but if the plan is approved, we would require additional funding to execute it. Modernization brings increased readiness, along with new technologies and enhanced capabilities. We will continue to innovate and adapt our revolutionary advances in space technology, directed energy, and unmanned aerial vehicles, to name only a few. Our efforts span the gamut of the world's most diverse, flexible, and powerfully integrated aerospace force. We must balance and fund our people, readiness, and modernization programs to ensure aerospace power for America well into the future.

REFORMING BUSINESS PRACTICES

The budget constraints of the past decade have forced us to take a hard look at our business practices. We have undertaken aggressive efforts to realize cost efficiencies by benchmarking the best business and management practices, whether in government or industry, and then adapting them to our unique environment. During the past year, we made significant progress in improving how we do business in everything from competitive sourcing of personnel positions to the flow of information within the Air Force Headquarters.

LEVERAGING INFORMATION TECHNOLOGY

We made some tremendous progress in 2000 in the way we plan for, acquire, and protect our information technology (IT). We started by creating the position of Principal Deputy Assistant Secretary of the Air Force for Business and Information Management to centralize IT decision-making and implement an Air Force-wide process to assess our IT investments in preparation for future budgeting efforts.

Driving our IT efforts is our "One Air Force, One Network" strategy, a multi-layered approach to integrating operations, people, technology, and oversight through an enterprise-wide, network-centric concept. Included in this strategy is the establishment of the Air Force Portal, the consolidation of our servers, and improvements in information assurance (IA). The Air Force Portal will provide all our members with a platform-independent, single logon capability to meet practically all their information needs. Currently, network-based access allows our members to logon anywhere in the world, supporting over 75 applications. The migration of most of our critical databases is planned for the near future.

In 2000, we saw the initial consolidation of our servers improve the utilization of our computer resources. We have created teams of experts at central sites and reduced our exposure to outside threats. Our goal is to have one base from each major command completed by August 2001 and all bases by September 2002. Our strategy advances IA through standardized practices and procedures; integrated network operations and information protection; automated and dynamic detection and response; consolidated situational awareness and decision support; and enhancements for deployed and classified environments. We are committed to IA as our top information warfare priority for long-term investment.

Finally, our Global Combat Support System-Air Force (GCSS-AF) is key to integrating our critical combat support information systems and processes across functional areas. GCSS-AF incorporates the Air Force Portal, allowing customer specific access while permitting the customization of information within our business information systems. Together, GCSS-AF and the Air Force Portal will provide the warfighter, supporting elements, and other Air Force members with timely and accurate data and the capability to transform this data into meaningful information. Seamlessly incorporating combat support into war planning allows military planners to improve their course of action development, analysis, and collaborative planning; and it measurably streamlines our business processes.

COMPETITIVE SOURCING

Our public/private manpower competitions are a defense reform initiative success story. In 2000, we began new competition studies impacting 2,895 positions, as required by Office of Management and Budget Circular A-76. The A-76 circular calls for the review of government functions meeting specified criteria, and competition with private-sector firms to determine the most efficient and cost-effective method to perform the work. In 2000, we concluded 30 competitions that covered 5,534 posi-

tions. These competitions resulted in 46 percent of the work being contracted, and the remainder being performed by the most efficient government organization. Both results yielded significant cost savings. As of April 2001, we have completed 48 percent of the A-76 competitions targeted by the 1997 QDR and the Defense Reform Initiative. Our annual top-to-bottom review of our manpower authorizations identified an additional 3,491 positions as eligible for competition.

PRIVATIZATION

Utilities

Defense Reform Initiative Directive (DRID) #49 directed the privatization of all utility systems by September 30, 2003, except those needed for unique mission or security reasons, or when privatization is uneconomical. This included two interim milestones: determining the feasibility of privatizing each system by September 30, 2000, and releasing all requests for proposals by September 30, 2001. Currently, we have completed the first milestone by determining whether or not to pursue privatization for each system (i.e., water, wastewater, electrical, and natural gas). This evaluation resulted in 434 systems becoming candidates for privatization. We continue to assess our options, and are now preparing the requests for proposal that are required to meet the second milestone.

Housing

The 1996 National Defense Authorization Act provided legislation to privatize military family housing. Privatization efforts are underway to meet the goal of eliminating inadequate military family housing units by the year 2010. We have awarded 4 of 9 pilot projects to privatize 6,280 housing units. During fiscal year 2001-04, we plan to privatize over 21,000 housing units at 22 additional installations. Our privatization efforts are part of our overall housing revitalization program outlined in our Family Housing Master Plan.

ACQUISITION REFORM

Today's environment demands continuous acquisition reform. We have consistently led the way with new acquisition initiatives, or "Lightning Bolts," and reinvention teams, which succeeded in saving more than \$30 billion during the last decade. Today, we are institutionalizing acquisition reform through new initiatives, such as the use of cost as an independent variable and reduction of total ownership cost, which improve acquisition affordability. In addition, we've recently developed an acquisition cycle-time reduction initiative known as the warfighter rapid acquisition process. This initiative has the potential to speed up the development and deployment of innovative solutions to warfighter requirements by 2 to 5 years. Our motto of "faster and smarter" continues to guide us as we build upon the successful efforts of the past.

PARTNERSHIP WITH INDUSTRY

We have consistently counted on industry to deliver superior products at reasonable prices. Now, we are institutionalizing partnering between industry and the warfighter. Initiatives such as teaming on proposals (TOPS) and total system program responsibility (TSPR) allow us to establish these partnerships early in the acquisition process. Integrated product teams extend this relationship throughout the acquisition life cycle. The process of alternative dispute resolution is now a part of all major acquisition projects, reducing the threat of expensive claims. We are reaching out to industry to maintain robust, rewarding, and healthy relationships. In our partnerships with industry, we are also developing a blueprint for defense reform that will guide future reform initiatives throughout the government. This blueprint was unveiled in February 2001. We will continue to look for new areas in which we can improve our partnership.

PLANNING, PROGRAMMING, AND BUDGETING SYSTEM REFORM

We are reengineering the Air Force Resource Allocation Process (AFRAP) to better link strategic planning, requirements generation, programming and budgeting, while providing a consistent focus on capabilities throughout the process. This new process will have a more rigorous and consistent analytical underpinning than earlier methods. We are planning to give our major commands an explicit slice of total obligation authority with the flexibility to program funds to best meet their own priorities. We believe this approach will improve the accountability and visibility of our resource requirements during the DOD and congressional review and funding processes.

FINANCIAL REFORM

We continue to make progress toward achieving auditable financial statements as required by the Chief Financial Officer (CFO) Act. An Air Force integrated process team is resolving issues related to the reduction of erroneous or unsupported obligations. This, in turn, will enable us to achieve an auditable statement of budgetary resources. We are making efforts to validate at least four of our crucial inputs that provide the foundation for unqualified audit opinions on Air Force financial statements. All these efforts will provide better financial information for Air Force commanders and managers.

LOGISTICS TRANSFORMATION

The Defense Planning Guidance, DOD Logistics Strategic Plan, and Defense Reform Initiative Directive #54 (Logistics Transformation) all identified a requirement for the services to modernize their logistics programs. Accordingly, we initiated a logistics transformation effort designed to improve overall combat capability. Through improved supply chain management practices, this effort gives the warfighter a complete picture of the enterprise's supply, maintenance, and sustainment support activities affecting readiness. Reengineered logistical support concepts will directly support warfighter readiness with a tailored sustainment strategy for a downsized, but expeditionary force structure, that is within the budgets currently projected across the FYDP.

DEPOT MAINTENANCE STRATEGY

Over the past year, we conducted a comprehensive review of our depot maintenance strategy to ensure our capability is properly sized for both wartime and peacetime utilization. Our current depot posture and future planning has been influenced by the downsizing of our operational force; the reduction of our organic infrastructure; a more active and robust private sector; the introduction of new technologies; and recent depot legislation changes. This review reaffirmed that depot maintenance is a critical element of our overall warfighting capability. Our recent experience in support of Operation Allied Force once again proved the wisdom of having a ready and controlled source of depot maintenance. As a result, our depot strategy will ensure we possess an organic "core" capability sized to support potential military operations. In addition, we recognize the need to efficiently utilize our organic facilities during peacetime. To that end, our depots are allowed to pursue repair workload beyond their "core" requirements that is awarded through public/private competitions when doing so would increase their "core" production efficiencies or offer a "best value" source of repair.

CONCLUSION

In a time when the Air Force was asked to do more with less, we succeeded in reinventing our business approaches to capitalize both on the inherent strengths of our enterprise and the best practices found in the private sector. We are at the forefront of apportioning positions between military and civil service functions and those that can be accomplished by contract personnel. We are becoming interconnected with a single, Air Force-wide network that puts crucial information at everyone's fingertips. We are reforming the acquisition process and partnering with industry, not only delivering products faster but assuring superior quality as well. In the last decade, our better business practices have saved billions of dollars, allowing us to revolutionize the application of aerospace power.

CLOSING THOUGHTS

From the beginning of powered flight almost 100 years ago to the space-related operations we conduct today, we have demonstrated that we are an innovative and adaptive force. We were born of change and it remains a part of our nature. We will continue exploring new technologies and operational concepts to identify those that offer potential for evolutionary or revolutionary increases in capability.

Our success as an aerospace force is founded on recruiting the finest men and women available and then retaining them. We must size, shape and operate the force to best meet the needs of our Nation. Through the structure of our ten Aerospace Expeditionary Forces, we provide the Commanders in Chief (CINCs) with trained-to-task forces, while adding predictability and stability to the lives of our airmen. We owe our people the education, equipment, and training to perform the missions we ask them to do. Finally, to keep our aerospace advantage, we must modernize and replace our worn out, aging, and increasingly difficult to maintain systems and infrastructure.

In a world that is globally-connected, national security and international stability are vital foundations of America's prosperity. Ensuring security and stability requires global vigilance, reach, and power—global vigilance to anticipate and deter threats, strategic reach to curb crises, and overwhelming power to prevail in conflicts and win America's wars. We are postured to provide balanced aerospace capabilities across the full spectrum of military operations, but in order to maintain America's aerospace advantage we must recapitalize our force.

Chairman LEVIN. Secretary Roche, thank you.
General Ryan.

**STATEMENT OF GEN. MICHAEL E. RYAN, USAF, CHIEF OF
STAFF, UNITED STATES AIR FORCE**

General RYAN. Chairman Levin, Senator Warner, distinguished members of the committee: Before we get started, I would like to thank my fellow chiefs for all their service and support, flying in close formation through the years, and these service secretaries for their commitment to serve. I also want to thank members of the committee for all you have done for the men and women in uniform over the 4 years I have had the privilege of serving as the Chief of Staff of the Air Force.

During that time we have seen a drop in readiness that has concerned us all. With your help, we have been able to arrest the decline, but much more needs to be done to regain our edge across the board. Consequently, this budget submission for the Air Force has a great emphasis on people and readiness.

We still need your help in attracting the highest quality individuals to serve in our military. I am happy to say this year we are making our recruiting goals, both in terms of quality and numbers. Our major challenge is retaining our best and brightest to stay with us for a career. Your help over the past years on pay, retirement, health care, etcetera, has been much appreciated.

Quality of life issues are terribly important to attracting and retaining great people, but also so is quality of service. Quality of service addresses the need to assure we give our airmen the proper tools to do the tough jobs we ask of them in Kuwait, Saudi Arabia, Turkey, in No Fly Zone enforcement where combat occurs daily. The same is true in the Balkans and in Korea. Quality of service is not just about the equipment with which we operate, but the ranges, hangars, buildings and shops in which we ask these dedicated individuals to do their work.

We all know quality begets quality and we have underfunded our modernization of our capital equipment and our infrastructure for too long. The average age of an Air Force aircraft is 22 years and continues to climb. We must turn this aging problem around.

In summary, I look forward to working with Secretary Roche and all of you as we complete the quadrennial defense review and address the budget issues before us. I know together we can make a great difference as we continue to rebuild our military to meet the challenges of the 21st century, and I look forward to your questions.

Chairman LEVIN. Thank you, General Ryan.

We are going to have a 6-minute first round.

Senator INHOFE. Could I have a question, Mr. Chairman?

Chairman LEVIN. Yes.

Senator INHOFE. Do we intend to have more rounds?

Chairman LEVIN. Yes. For our first round we will use the 6-minute rule and then, depending on how many people are still here and how much time we have left, we will decide on how long the question period will be for the second and any successive rounds.

Senator INHOFE. Thank you.

Chairman LEVIN. I want to ask each of you for the record to give us your list of unfunded requirements for 2002. I am not going to ask you here, but I am going to ask each of you to submit that for the record.

[The information referred to follows:]

ARMY

UNFUNDED REQUIREMENTS

I appreciate the opportunity to comment on the Army's fiscal year 2002 resource posture. Clearly, the fiscal year 2002 Amended Budget represents a balanced program that will allow the Army to remain trained and ready. I am pleased to note significant increases in a number of key areas—soldier pay and housing, base operations, real property, and science and technology. These will improve quality of life for our soldiers and their families, slow deterioration of our aging infrastructure, and advance Army Transformation.

However, there is still much to be done. To stem the critical decline in our facilities, the Army has assumed some risk in our operating accounts. We will mitigate this risk in the year of execution. Additional resources will allow us to accelerate recapitalization of our counterattack corps, restore necessary OPTEMPO funding and begin stabilization of our infrastructure.

The following list outlines these and other fiscal year 2002 Army shortfalls.

FISCAL YEAR 2002 ARMY SHORTFALLS

(in millions of dollars)

	Shortfall	Cum
OPTEMPO	300.0	300.0
Antiterrorism/Force Protection	306.0	606.0
SRM/RPM	287.7	893.7
Reserve Component Duty Training Pay	100.0	993.7
Reserve Component Full Time Support	76.4	1,070.1
Recapitalization	566.2	1,636.3
Objective Force Development	43.1	1,679.4
Interim Brigade Combat Teams	93.6	1,773.0
Second Destination Transportation	70.7	1,843.7
Ammo Stockpile Management	81.4	1,925.1
Current Force Modernization	1,969.0	3,894.1
Test and Evaluation	193.8	4,087.9
Infrastructure Support and Information Technology	449.1	4,537.0
CTC/Training Range Modernization	493.1	5,030.1
Initial Entry Training	32.6	5,062.7
Mission Oriented Readiness	259.9	5,322.6
Sustainment Systems Technical Support	68.4	5,391.0
Depot Maintenance	194.4	5,585.4
Education, Transition, and Other People Programs	137.6	5,723.0
Spares/War Reserve Secondary Items	675.0	6,398.0
Homeland Security (Weapons of Mass Destruction)	19.6	6,417.6
Army Family Housing	353.0	6,770.6
Maintenance and Repair Backlog	2,778.5	9,549.1

NAVY/MARINE CORPS

The Navy's list of unfunded requirements for fiscal year 2002 is provided in the following tables.

CURRENT SHORTFALL (IN \$ MILLION)		
Must Fund/FY 2001 Carryover - Part I		
Program		Comments
Manpower		
Over-Strength		
FY01 Strength Over Execution	13	Funds over-execution of and strength in FY 01 estimate to and FY 01 over by 251 officers and 2,422 enlisted. Maintains and strength of 376,000 (+410 off)+3,457 en) increasing officer workyears by ~600 (\$58M) and enlisted workyears by ~4,300
Permanent Change of Station (PCS)		
Household Goods Pilots	1	Funds DOD-directed pilots to enhance/improve the PCS experience. Full Service Move Project will provide service members with a relocation package w/benefits such as point to point move management, on-time pick-up/delivery, full replacement value protection
Other Initiatives		
Active Duty Special Training (ADST)	8	Funds peacetime support to CINCs to level executed in prior years and USMC UNITAS deployment
Total High Priority Manpower	21	
Readiness/Other Operating Support		
Ship Depot Maintenance	205	Funds Ship Depot Maintenance to a percentage of the newly adjusted requirement (PR03 Baseline Assessment Memorandum) - 93% surface/97.5% submarine/97.5% aircraft carrier
Aircraft Depot Maint	28	Emergent requirements for all components (\$10M). \$45M funds FY 2001 NADEP shortfall which displaces FY 2001 work into FY 2002. (Includes \$7M for reserves)
T-AE in PACFLT (Ship Charter)	15	Increases T-AE presence from 3 FOS/1 ROS to 2 FOS/2 ROS
Commercial Utilities	19	Emergent utility cost increases in Natural Gas and Electricity are due to natural resource shortfalls, a colder than normal winter and California electricity deregulation. (Family Housing: \$20M Navy/\$12M MC, O&M: \$38M Navy/\$53M MC)
PWC Utilities	97	Reflects projected losses for FY 2001/2 due to San Diego electricity and nationwide natural gas cost increases. Initial shortfall of \$245M offset by \$145M (anticipated amount from FY 2001 supplementers)
Ehime Maru Claims	30	Claims/payments to survivors
Locality Pay - Monterey/Newport	5	Inclusion of Monterey in San Francisco area and Newport in Boston area for locality pay calculation increases civilian pay above beyond capability of Naval Postgraduate School and Naval War College to absorb without degradation to core educational program
DMS Transition	15	DMS does not currently provide all the messaging capabilities required by the Fleets such as special handling and Emergency Action Messages. Therefore, both DMS and the transitional messaging systems currently in place will be required to support tactical requirements
INMARSAT	8	FY 02 funded to 119 channels. Requirement grown to 130
Travel Service Fee	16	
Total High Priority Readiness/Other Operating Spt	438	
Infrastructure		
Mandatory Agreement Compliance	92	Funds BRAC mandatory agreement compliance
Total Other Infrastructure	32	
Part I Total	551	

CURRENT SHORTFALL (IN \$ MILLION)
Fix Underfunded Programs - Part II

Program		Comments
Manpower		
Other Initiatives		
Career Sea Pay	102	Grants SECNAV discretionary authority for revised pay table which hasn't been updated since 1968. 1.7M is RPN. Outyear tail of a similar amount.
Special Duty Assignment Pay (SDAP)	12	Funds rate restructuring and expands SDAP to additional suit areas. Outyear tail of \$12M/year.
ITEMPO	190	FY01 National Defense Authorization Act requires payment of a \$100/day allowance to service members deployed more than 400 days out of the preceding 730. Language proposed to OSD to delay implementation of payment until FY04. Cost estimate based on initial models. Schedule changes that NPC/N1 currently determining enlistment requirement. Cost estimate updated to reflect latest deployment schedules.
Personnel Initiatives: SRB New Payments	22	Increases new payments to \$187M to help attain reenlistments for required grade/rank mix at 378K end-strength (\$7M over adjusted FY 01 new payment program of \$180M).
Personnel Initiatives: Enlistment Bonus New Payments	5	New payment increase to help meet increased accession mission.
Personnel Initiatives: Navy College Fund	13	Funds Navy College fund to revised FY 01 program level to help meet increased accession mission required for 376K strength.
Personnel Initiatives: ADSW	5	Funds additional CINC contributory support.
Personnel Initiatives: Navy CASH	3	Navy College Assistance Student Headstart program. Pays E3 salary up to 12 months for 150 end-strength to pursue associates degree.
Personnel Initiatives: Enlisted Flight Pay (CEFP)	3	Revised pay rates for enlisted flightcrewmen. Retention incentive.
Personnel Initiatives: Navy PCS Initiative	6	Funds GENDET Targeted Enlistment Program (TEP) which guarantees an "A" School upon completion of an initial 9 to 15 month GENDET tour (1,000 moves-\$2M). Also funds first term split tours for 1st term sailors to provide a broader view of the Navy before reaching the reenlistment decision.
Personnel Initiatives: Phased Enlistment Bonus Pilot	3	Would allow for payment of Enlistment Bonus during training vice current requirement that pay a lump sum at the end of training. Proposed pilot seeks to reduce attrition in longer jobs/cos by providing regular incentives vice a larger payment at a much later date. Initial program would be implemented in the Nuclear training pipeline.
Other: Distribution Incentive Pay	3	FY 02 omnibus legislative proposal - authorizes SECNAV to pay up to \$750/month to ensure adequate volunteers for hard-to-fill job/locations. (Includes \$2M O&M start-up costs)
Other: PCS Bowwave	16	PCS bowwave from FY 2001 - 3,119 moves.
Total Other Manpower	355	
Readiness/Other Operating Support		
Ship Depot Maintenance	124	Funds Ship Maintenance to 100% of PRO3 adjusted requirement; all platforms - includes \$8M reserve.
Aircraft Depot Maintenance	16	Fund to 100% of goal (reserves).
P&E/PHL	61	Funds technical support of over 4,000 in-service aircraft, systems, and related ground support.
APN Spares (100%)	294	Potential shortfall based on recent N4 baseline assessment. Fund at 100% of requirement (\$274M) and cover FY 01 bowwave (\$80M).
Marine Gas Turbines - 2S COG	17	Funds refit and refurbishment of Allison 501K Ship Service Generators and GE LM2500 Propulsion engines.
Close In Weapon System (CIWS) Overhauls	6	Fund 12 (v.8 budgeted) overhauls. Current backlog is 84.
Gun Weapon System (GWS) Overhauls	18	Funds additional depot & portside overhauls of MK75 & MK45 mounts. Congress provided 10M in FY 2000 and 12M in FY 2001 to support MK 45 Mod 1 maintenance.
IIUSS Cable Repair	6	Fully funds IIUSS cable repairs required to maintain undersea surveillance system.
Recruiting/Advertising/Training	3	Advertising rising marketplace costs for awareness, variety of competitive forces, and increased contracting mission. Recruiting Support: GSA vehicle mileage rate increase, IT2 personnel pay raise, cost phones for recruiters, etc.
National Archives and Records Administration	6	Funds document storage requirements.
NROTC	1	120 additional scholarships (includes \$298K for RPN). Outyear tail totals \$97M across FYDP.
MSC Ship rates	4	Rate adjustment increase requires funding to keep 8 oceanographic survey ships in the operating fleet in Full operational Status (FOS).
E8 Repair of Reparaties	4	Parts for 16 E-8AUE-48 aircraft to ensure continuous aircraft availability for mission execution.
Other: Smart Card	5	Required for deployment of smart card technology in accordance with SECDEF approved implementation.
Other: Declassification	3	Declassification efforts for SECNAV and CNO generated documents reaching review date. Required per Executive Order 12958.
Other: Common Access Card	6	Required for deployment of common access card technology in accordance with SECDEF approved implementation.
Total Other Readiness/Operating Support	573	
Infrastructure		
Revitalizing where we work and live (Family Housing \$672M. OROS/RPM \$1.451M. MCON/MCNR \$1.383M)	1,939	Shore installation support focussed on elimination of C3/C4 facility deficiencies. Family and Bachelor housing improvements accelerating BOs for Sailors Ashore and demolition (MILCON \$570M. RPM \$1.049M. FHN \$320M). Includes both active and reserve.
Total Other Infrastructure	1,939	

CURRENT SHORTFALL (IN \$ MILLION)		
Modernization		
Prior Year Completion (FY 03-07)	1,600	Prior year shipbuilding costs. Reflects FY 03-07 increment
Allegany Ballistics Lab	20	Facilities restoration plan.
CVN-77	16	Rephased R&D stream to meet the events associated with supporting the SCN contract sign in Jan 01.
CB Equipment	49	Tactical support equipment, vehicles, communications gear to replace obsolete equipment and make interoperable with Marine Corps and other Services.
IT-21	58	Acceleration of IT-21 Shipboard Networks to fund 100% of baseline requirement for satellite access for shipboard users to ashore classified and unclassified Wide Area Networks.
Chief Engineer (CHENG)	14	Recent CEB and Fleet Modernization Program discussions imperative of improved systems engineering and management at all levels. Additional FY 02 funds required for RDA CHENG for systems engineering and analysis for Air Dominance and Power Projection program.
Joint Interface Control Officer (JICO)	3	Requirement still being reviewed (Air Force has the lead Executive Agent role and is still reviewing requirement; latest estimate \$150M to be divided among the Services.
DMS Procurement	15	Defense Messaging System to feed DNS 3.0 capability on schedule with other DOD services and agencies and to achieve the closure of AUTODIN.
NMCI Crypto	16	Implementation of NMCI by FY 03Q4 is dependent upon adequate quantity of crypto being funded as GFE.
NAVMPs	5	Naval Mission Planning System - reduce the risk in the implementation of the Joint Mission Planning Combat Version 1 system.
VTUAV	11	Increased scope of work and associated schedule change to complete software and risk reduction testing.
Long term Mine Reconnaissance System (LMRS)	10	Fund EAC growth to allow deployment of organic MCM systems with like background in FY 2005.
CVN 69 Refueling Complex Overhaul (RCOH) Full Funding	67	Funding required to deliver mission ready ship. Current response to CVN69 RCOH RFP from the shipbuilder indicates an increase in schedule duration of 3 months. Not funding will result in redelivering a non-mission ready ship at completion of RCOH.
H-60 FLIR/Heat/Armed Helicopter Kits	13	Procure 6 FLIR/SH-60H kits for H-60B/H aircraft. Procurement merges kits to Armed Helicopter capable airframes. All H-60B "A" kit installations are complete. The remaining SH-60B "A" kit installations will be complete in FY01. All kits for "B" and "H" models will be used for the SH-60R. A total of 125 kits will be procured. POM 02 funding ceases at 90 kits total which is short of the requirement for all B, H and ultimately R versions to be Armed Helo capable.
T-45C Quantity	30	Increases T-45C funding to procure 2 additional sets for a total of 6 aircraft in FY02, 6 AC/yr required to meet the inventory objective of 234 aircraft and service life of FY 2035.
Training Ordnance	123	Funds live fire training ordnance in support of Kosovo lessons learned and IDIC requirements. FY02 includes funding to convert 7,560 500lb inert bombs to 1000lb inert bombs and \$4.6M to cover PES and ILS program office expenses.
C-40A Quantity	186	No aircraft currently funded in FY02. Request is for 3 C-40 aircraft to replace aging C-9. Total requirement is 29. 6 aircraft contracted to date. Request includes \$7.2M for spares.
E-6 TACAMO Regeneration Assurance Team (TRAT)	15	Funds deployable E-6 TACAMO Regeneration Assurance Teams (TRAT) (including communications & vehicle replacement). TRATs sustain the TACAMO mission after wartime dispersal. Shortfalls are unfunded in FY02.
FA-68 ALQ Band 9/10 Transmitter	38	Ensures complete inventory of band 9/10 digital transmitters to enable retirement of 268 Band 9 analog transmitters. Procures last 53 units prior to production line shutdown.
F/A-18E/F Integrated Defensive Electronic Countermeasures (IDECM) Radio Frequency Countermeasures (RFCM)	45	Funding allows for IDECM/RFCM installation in each production E/F in FY-02. Prevents need to cannibalize or cross-deck systems to meet training and deployed requirements.
F/A-18E/F Production Engineering (FOTAE)	40	Lack of funding will require parking of three flight test aircraft. Current funding profile will delay deployment of MDS, AIM-9X and GBU-24 on F/A-18E/F. Reduces F/A-18E/F engineering and technical support in support of avionics and other upgrades by 6%.
P-3C Aircraft Improvement Program (AIP)	60	Procures an additional four AIP kits in FY-02 (to achieve the total economic order quantity of eight).
Sonobuoys	32	Procurement funding required to maintain constant inventory at current level of 255K. \$30M/year required to replace C-2 level expenditures, while current funding is \$7.7M for sonobuoy production (77K sonobuoys).
PGM Inventory	213	Increase procurement of JDAM and LGBs to max production rate.
Total Other Modernization	2,897	
Part II Total	5,564	

CURRENT SHORTFALL (IN \$ MILLION)		
Transformation - Part III		
Issues w/FY 2012 Impact	323	Trident SSBN converts four Ohio class SSBNs (currently planned for inactivation) to SSBNs carrying up to 154 Tomahawk cruise missiles each and dual Advanced Sea Denial Systems (ASDS) for clandestine SDF insertion and extraction. Significantly boosts early-in-theater firepower. The program is currently unfunded.
SSGN Conversion	640	Funds S&T for "generation after next" combatants including: electric warfare; internal combat ship and space systems development.
Future Naval Force Rapid Transformation (S&T Plus)	85	Funds conversions to Close-in Weapons System (CWS) Block 18 which increases the defensive capability to counter small, fast surface craft and slow flying aircraft in addition to improving capability against high speed missiles and aircraft.
CWS Block 1B	121	Funds conversion kit missiles and launcher upgrades for the Rolling Airframe Missile (RAM) Block 1 which provides an effective "first and forget" IR self defense weapon for non-Aegis destroyers and amphibies against the most stressing ASCM threat. Improved range and an IR all-the-way seeker permits earlier and multiple engagements of incoming missiles.
RAM Block I	58	Funds purchase of T-5 Tankers. Tankers will operate safely and economically until 2016, ten years beyond current leases. Break even point is FY05.
T-5 Tanker Buyout	1,286	The Navy has the option to buy 13 MPS ships which Navy currently pays a Capital -hire lease and an Operating Hire lease. If the Navy buys these ships prior to the expiration of the current lease (FY2009 to FY2011), the Navy would save all the funding required for the Capital Hire leases and could re-complete the Operating Hire lease for significant savings.
MPS Lease Buyout	41	\$390M funds 7 F/A-18 E/F aircraft and ancillary support and spares for those 7 aircraft. \$349M funds a total of 6 aircraft.
Adopt F/A-18 Quantity	24	Procures 3 of 18 required UCMC replacement C-12 aircraft.
UC-350	38	Funds remaining CREI council approved initiatives.
CRE/FOC Initiatives	225	Acoustic Rapid COTS Insertion (ARCI) upgrades current submarine sonar systems with an open architecture commercial-off-the-shelf (COTS) computer system allowing continued upgrades as technology develops. Full implementation is currently planned for FY08 but conversion of all submarine could be accelerated from FY08 to FY04 with additional funding.
Sub Sonar Technology Insertion	36	Advanced Unmanned Underwater Vehicle (UUV) have the potential to extend submarine sensors beyond the range of hull mounted or towed systems. Currently funded in S&T, additional funding could accelerate the UUV insert plan to field during FY05-06 a family of SSN launched, tethered UUVs to conduct maritime reconnaissance, underwater search and survey, aid in communications and navigation, and submarine track and trail.
Advanced Underwater Unmanned Vehicle	30	Funds option development for AOE-10 C class.
Fast Triple Replacement Ship	30	Procures 24 ATFUR kits for F/A-18 C/D.
Advanced Targeting FLIR	34	Sea-based Endurance UAV could add camera-based surveillance and precision targeting capability, replacing some manned systems (S-3ES-3, some P-3MMA) and providing SAR, GMT, EOIR sensors for 24 hour/day surveillance and targeting over land or water, and a growth capability for a lethal mission. Funding profile shown reflects program proceeding aggressively from the current UCAV(N) ACTD to a fielded system in FY12, three years faster than current plans.
Sea Based Endurance UAV	16	DOTS for MPF (2) to towing A/A.
MPF Initiative	6	Funds 5 remaining systems for each MEF with JSTAR-S-C capability.
JSTAR-S AAO buyout	11	Funding will provide AIM-102B (AMRAAM) capability on two AV-8B wing stations. Leverages
AV-8B BVR Capability	15	Allied Non-Recurring and gives AV-8B BVR A-A capability.
EA-6B USQ-113/V13	12	Funds 57 follow on jammers to replace obsolete system.
CH-53E HHVS "B" Kits	14	Procures 15 additional Forward Looking Infrared systems.
UH-1N Naval Thermal Imaging System	15	Procures 10 of 100 required NTIS upgrade systems for the UH-1N (forward fit to UH-1Y).
Non-Lethal Weapons	291	Provides a force protection capability to respond to threats with less than deadly force. Provides defense against Short/Medium range TBMs. Protects littoral airfields/ports for joint force deployment. First unit equipped FY03, IOC FY04. All VLS AEGIS CG-DG Navy Aegis capable. Inventory of 12 SM-2 BLK IIA per ship.
Arma TBMD	7	Funds to conduct flight demonstrations of new technology applied to SM-2 Block IVA.
SM-2 Bk IVA (BMDO)	144	Navy Theater Wide TBMD is a defense against medium range TBMs, providing protection for regional population centers and a second layer of defense for ports and airfields. Only limited RDT&E is funded by BMDO. Shows AEGIS Leap Intercept (ALI) testing currently in progress be completed successfully, an additional \$2.8B across the FYDP. (\$400M per year) would fund fielding a contingency capability (two ships and 50 missiles in Block 1A configuration) in FY06-07 timeframe.
Navy Theater Wide (BMDO)	500	Accelerates OPENSEN conversion of first five baseline 1 CG-47 Class ships for BMD mission.
Cruiser Conversion Acceleration	37	Accelerates R&D effort to develop the Advanced Nonwired Systems/Naval User Objective System (ANS/MUOS). This system will provide tactical war fighters of all services with greatly increased mobile communications capability as a replacement for the UHF Follow-On (UFO) satellite.
Naval User Objective System	11	Funds 30 kits for F/A-18 E/F.
MDS/Link 18	323	Accelerates SeaView IT 21 baseline. Equips 23 of carrier battle group and ARG deploying ships (>200 ships) with IT 21 capability by the end of FY02.
IT-21	14	Accelerates 2 GDLN systems. GDLN provides real time imagery to the fleet from tactical and theater ISR platforms.
GDLN Bandwidth Data-Link	56	Accelerates the development and implementation of web-enabling applications within the NTCCS.
Web Enabling	13	Web-enabled management of Manpower and numerous other initiatives which address the aging civilian workforce.
Civilian Manpower and Personnel Mgmt IT		

CURRENT SHORTFALL (IN \$ MILLION)		
Improve Readiness Capability/Operational Logistics	31	Enhance interoperability of Combat Logistics Force, Strategic Sealift, MCM, Amphib Equip
Advanced Radar Program Development	56	Includes ACE-1 follow-on and advanced UNREP systems
Navy Rapid Technology Transition	36	Improved radar for surface ships
New Missile Technology Flight Demonstration	33	Develop Tech Insertion Strategy for all acquisition programs
Expeditionary C4 Grid	7	Leverages an Advanced Sensor technology project
Modern Applications	36	A multi tiered architecture with Expeditionary Sensor Grid and Expeditionary Weapons
Network Infrastructure	237	Updates software applications around the Fleet, IFF, Combat ID, TAMPs, DMS, CTAPS, Electronic Charting, and TBMCs
Security	112	Accelerates IT-21 CVBG systems to update all legacy tactical communication systems currently deployed
Civilian Manpower and Personnel Mgmt	11	Provides funding for Computer Network Defense Systems, Crypto modernization, Secure Voice systems and other systems
Personnel Distribution and Assignment	2	Web-enabled management of Manpower and numerous other initiatives which address the aging civilian workforce
	3	Updates N1's current aging patchwork of legacy systems, tracks ITEMPO
BUPERS On-Line	4	Numerous On-Line tools for recruiter management, Updates N1's current aging patchwork of legacy systems, tracks ITEMPO, Research on Military recruiting resulting in improved Recruiter Infrastructure, interconnected requirements web which will lead to increased Recruiter productivity, new Recruiter Training Program, new Recruiter Technology Seabag, improved Recruiter selection process
Online Recruiting Station	176	Numerous On-Line tools for recruiter management, Research on Military recruiting resulting in improved Recruiter Infrastructure, interconnected requirements web which will lead to increased Recruiter productivity, new Recruiter Training Program, new Recruiter Technology Seabag, improved Recruiter selection process
Revolution in Training	32	Funds eight programs that would significantly enhance the implementation of the Revolution in Training, Navy e-Learning, Training Re-Engineering Program, Continuum Training Plans for Navy-wide use, Advanced Education Strategy, Fleet Aviator Simulator Training Plan, Transition to PC-based simulation, Immerset Virtual Environment Training for Fleet efficiencies
Transforming Energy Practices	58	Funds energy projects, Geothermal energy, energy research and development
Leveraging Technology and Innovation	180	Funds E-Business operations office, leveraging information technology and innovation business practices
BRAC Acceleration	180	Environmental cleanup necessary for accelerated transfer of BRAC properties (\$129M) and costs to support early transfer of Marine Island (\$54M)
Part III Total	8,577	

CURRENT SHORTFALL (IN \$ MILLION)		
Other Issues		
Total	755	
Other Issues		
UHD-9	999	
CVN-69 RCOH	57	
Total Other Issues	756	
Grand Total All Issues		
Must Fund Programs	551	
Underfunded Programs	5,564	
Transformation	5,577	
Other Issues	755	
Total	12,447	

AIR FORCE

The following are the Air Force's fiscal year 2002 unfunded priorities:

FY02-Remaining Shortfall (Prioritized J to N) - UPL

<u>Priority</u>	<u>Description</u>	<u>Remaining Shortfall</u>
1	Space Lift Range Viability	\$53.9
2	BOS/Base Maintenance Contracts	\$182.1
3	Wartime Reserve Munitions Replenishment	\$362.0
4	Readiness Spares	\$46.5
5	Depot Maintenance	\$113.7
6	Comm Readiness I	\$224.2
7	Link-16/Digital Data Link	\$232.8
8	Civil Airspace Access (GANS/GATM)	\$50.9
9	ICBM Batteries	\$4.2
10	Time Critical Targeting	\$291.0
11	Real Property Maintenance I (1.2% PRV)	\$520.0
12	Military Personnel	\$71.6
13	Peacekeeper (PK) Retirement (Pending Congressional Approval)	\$12.2
14	Supports Future C-17 Multi-year	\$180.9
15	Target Drones (Aerial Targets)	\$6.2

16	Combat Support Vehicles	\$51.2
17	Comm Readiness II	\$325.9
18	Bomber Upgrades	\$730.7
19	Fighter Upgrades	\$640.9
20	JPATS Disconnect	\$5.8
21	BRAC	\$22.0
22	Aging Aircraft Enablers	\$30.0
23	T&E Maintenance and Repair (M&R)	\$45.0
24	Real Property Maintenance II (1.6% PRV)	\$679.6
25	F-16 SEAD	\$331.3
26	Contractual Commitments	\$123.6
27	Munitions Swap Out/Cargo Movement	\$127.0
28	Classified	\$89.8
29	Comm Readiness III	\$130.6
30	Military Family Housing Investment	\$138.0
31	Real Property Maintenance III (2.0% PRV)	\$746.0
32	Fighter/Bomber Self Protection	\$45.0
33	ISR Upgrades	\$127.0
34	Combat Search and Rescue	\$128.7
35	Ground Training Munitions	\$19.0
36	Antiterrorism/Force Protection II	\$24.6
37	ICBM Sustainment Shortfall	\$56.0
38	Full Combat Mission Training	\$44.9
39	Weapon System Sims	\$44.1
40	AEF Combat Support	\$27.3
41	Theater Missile Defense	\$24.7
42	EAF NBC Training & Equipment	\$56.2
43	Science & Technology	\$104.4
44	Space Surveillance/Control	\$8.1
45	Recruiting & Retention	\$27.5
46	Space Ops Training-Simulator	\$85.0
47	C-130J*	\$81.0
48	Missile Defense Enablers	\$150.0
49	MILSATCOM Shortfall	\$37.6
50	GPS Anti-Jam User Equipment	\$25.8
51	Nuclear Detonation Detection Sustainment	\$12.0
52	DoD/Intel Community Space Coop	\$8.0
53	NORAD/USSPACE Warfighting Support	\$11.5
54	Space Maneuver Vehicle (SMV) Ops Demo	\$31.0
55	USAF Logistics Support	\$8.3
56	Space Warfare Center (SWC) Shortfalls	\$16.5
57	Carryover	\$275.8
58	MILCON	\$1,029.7
59	AFRC	\$52.0
		\$9,131.3

* AF is fully supportive of additional C-130J purchases consistent with force structure plan

Chairman LEVIN. We do not know to what extent Congress is going to be able to accommodate the budget amendment for the year 2002. The Budget Committee and other committees are going to be involved in that as well as us. But the larger question I want to ask you about has to do with future year funding, and that has to do with whether or not you are putting together a longer term strategy which our fiscal situation can support.

So let me start with the service secretaries and ask each of you this question. Do you expect that after the completion of the QDR you will be proposing a fiscal year 2003 budget which will require additional funding above the level that you are requesting for the year 2002, or are you planning to make offsetting reductions in lower priority programs or in business practice savings which would finance a new strategy at or below the funding levels that you are requesting for the year 2002?

So we will start with you, Secretary White, as to what is your current expectation relative to the 2003 request following the QDR, just your best estimate at this point.

Secretary WHITE. Well, Senator, it is difficult to predict. If the QDR process dictates or the Secretary decides that force structure changes will be a part of that, then obviously if the force gets smaller as a part of the QDR process that will create a different funding requirement going forward. If the force stays the same, we will make every attempt to offset the additional requirements above the levels we are looking at now with business efficiencies that we will hope to employ during the 2003 year and get sorted out over the next few months as we continue to work this.

So it is difficult to see exactly where that balance is going to come out short of the final decisions on the strategy review. But if it were to stay the same, I think that we will look toward at least this level of funding next year net of business practice improvements that we could make.

Chairman LEVIN. Thank you.

Secretary England.

Secretary ENGLAND. Senator, I think it would be a combination, and that is my best estimate at this point. If you look at our recapitalization rate, as the CNO commented, at our present rate we will go down to about 240 ships. I do not know what the outcome of the QDR will be, but I doubt it will be that low in terms of our naval services. After all, we are a forward-deployed force, a rotational force, so we are always around the world. Therefore I would expect that we would not be that low. So we will need additional resources.

Our airplanes are also very old. We do need to recapitalize the airplanes. At the same time, we do anticipate that we will have better efficiency, we will indeed save money as we go forward through business practices. So I would expect that we will save money, but we will also have some additional needs. So I do not see that our request will be lower this year, but hopefully it will not be as much as if we did not take action in terms of better business practices.

Chairman LEVIN. Secretary Roche.

Secretary ROCHE. Mr. Chairman, the 2002 budget does a lot to help us get well in maintenance and people-related things, but it does not do all that we need. We cannot live with the procurement holiday in airplanes that has existed for the last 8 or so years, where we have just had insufficient purchases of airplanes. Our planes age increasingly. The costs—the time to put a tanker through a logistics center now is over a year because these planes are failing in ways that we did not anticipate because they are just getting old.

So we will need more money. At the same time, we have an obligation to look for offsets, to look for ways to do things more efficiently, put in better business practices. But some of these things will make pain for certain areas and we will have to work that out, sir.

Chairman LEVIN. Thank you.

I want to talk to you about an additional round or rounds of base closures. Let me start with you, General Ryan, and go down and ask each of our service chiefs and our service secretaries this question: Do you agree with the President and Secretary Rumsfeld that we have unneeded bases and that we should have another round of base closures to eliminate the excess infrastructure and to free up resources for modernization or for other higher priorities? General?

General RYAN. Absolutely, yes, sir.

Chairman LEVIN. Could you be a little more fulsome? Why do you believe that? Give us an estimate as well of the significant savings here.

General RYAN. Over the past 4 years we have continued to ask for a base closure. The Air Force is overbased for the force structure we have today. We think that we can save significant amounts of money in the out years with a base closure. But sir, during the years that you do the base closures you actually have to invest to be able to save in the future.

We have out of the past rounds of savings of base closures had extensive savings, calculated in the \$4 billion to \$5 billion a year amount over these years today, the last base closure being in the mid-nineties. So we emphatically support base closure.

Chairman LEVIN. Now I will have to ask each of our other witnesses to be much shorter because my time is up. If you could just give us now a short answer to that question.

Secretary ROCHE. Yes.

General JONES. Sir, yes, I support it. I support the Secretary's findings on that. But as the smallest service with the smallest bases, I have the least to offer.

Chairman LEVIN. Thank you.

Admiral Clark.

Admiral CLARK. I have always believed that one of the fundamental principles we should follow is that we should not pay a nickel for a structure we do not need. Then, having said that, I would say we are already in our major naval bases very consolidated. I think that the potential savings would be in the area of support structure.

Chairman LEVIN. Thank you.

Secretary England.

Secretary ENGLAND. I would support the comments of the CNO. We definitely as we go forward, depending on what our future force is, we do have to size it appropriately because we cannot afford to carry extra infrastructure.

Chairman LEVIN. General Shinseki.

General SHINSEKI. The Army has excess capacity that we have carried and we believe that a BRAC would help adjust that.

Chairman LEVIN. Secretary White.

Secretary WHITE. I agree with the chief. I think we have excess infrastructure and we have to do something about it.

Chairman LEVIN. Thank you.

Senator WARNER.

Senator WARNER. Thank you very much.

I will lead off with an Army question. It really goes to operational, but we have before us today a great deal of concern about the future of NATO, the future of NATO expansion, our participation in NATO. General Shinseki, I remember visiting you in Bosnia when you were the commander of our forces over there, and throughout the Bosnia-Kosovo chapter it seems to me that the United States shouldered equally with our allies the burdens and the risks of those operations.

But today's headline says: "U.S. Offers Aid to Macedonia Effort: Rumsfeld Limits Role to Logistics of Rebel Disarmament." Logistics. Is there something behind this that is not in the headline, because we are constantly concerned about the European defense initiative and their desire to go off and establish their own force structure, which I believe is somewhat redundant and in competition with NATO? This may feed into their arguments that they should establish their own force structure because we decline to take on and share equally the burdens and the risks of military operations.

I will lead off with the Secretary. You start and then I will invite the General, who had hands-on experience over there for many years.

Secretary WHITE. Senator, I am unaware of any change coming from the Secretary or even a part of the QDR discussions to date that would indicate any less emphasis on our commitment to NATO. We have been the leader of that alliance since its founding and we have actively participated and provided the leadership in Kosovo and Bosnia, and I think we will sustain that in the future. I defer to the chief.

Senator WARNER. Chief.

General SHINSEKI. Senator Warner, I apologize, I am not as quick with the morning headlines and I had not read that article. I am not aware of any changes. Our leadership both as a global leader and inside of NATO has been consistent.

Senator WARNER. I should hope so, and I would hope that does not indicate that we are going to say we will opt for just logistics and leave the risk fighting to others.

Yesterday I had a chance to visit my National Guard group in Virginia and I was astonished to learn that the Army indicates what level of technical assistance the Army should supply and yet only 50 percent of the commitments from the regular Army are flowing to the Guard in terms of manpower. I will provide this chart to you.

But the point is that our Guard in Virginia are very proudly working up to go in to be a contingent in Bosnia to take on those duties. Other States' Guards are right alongside the regular forces. Yet back home in their duties, which are quite diverse as the Guard in training up and working up, they seem to have—and this is nationwide, it was related to me—all 50 States are roughly only receiving from the Department of the Army about half the trained personnel full-time that they need.

Mr. Secretary, have you had an opportunity to address that question? If not, I will give you a month or 2 to work on it and then I will be back.

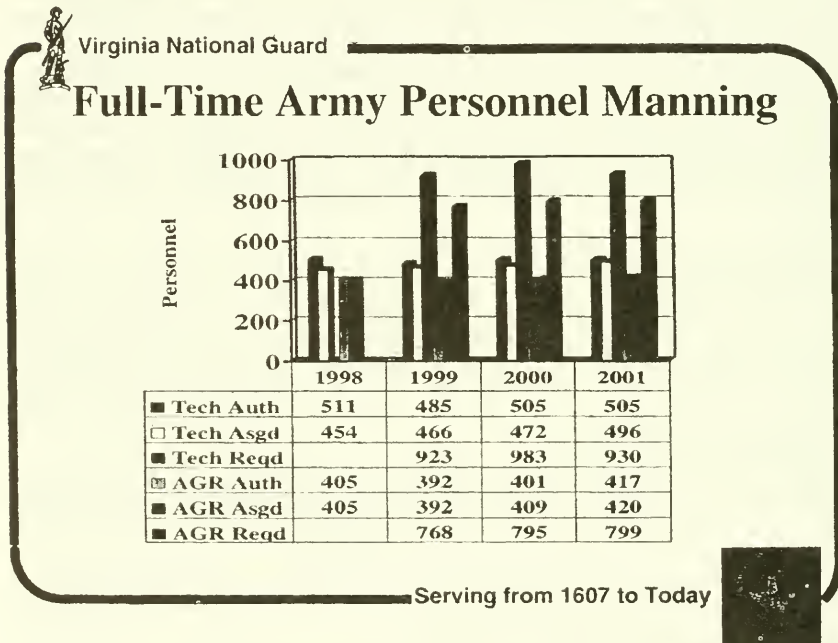
Secretary WHITE. Clearly, the integration of Reserve components and their stepping up the missions that in the past have been taken almost exclusively by active forces indicates that we are one Army, and we have to sustain and resource on that basis and they deserve the support of the Department in accomplishing this.

Senator WARNER. I would like to come back to you in about 30 days and get an update on that.

Chief, do you care to add?

General SHINSEKI. I am not familiar with the chart, Senator, but I would be very happy to review it and provide some detailed responses.

[The information referred to follows:]



ACTIVE COMPONENT SUPPORT THE RESERVE COMPONENT

I share your concerns about the levels of full-time support manning in our Reserve components. The numbers on the chart you provided indicate the current levels of manning for Active Guard/Reserve (AGR) and military technicians (MILTECH) of the Virginia Army National Guard. The matching of Reserve component requirements to resources is an issue that the Army has pursued for several years. In regard to the chart, it is correct that the Virginia Army National Guard is near 50 percent of their required strength with AGR and MILTECH. This is similar in the Army National Guard in other states and in the Army Reserve. We have sought, along with the National Guard Bureau and the Army Reserve, to obtain budgetary increases to permit the manning of approved requirements.

As such, the Army seeks to incrementally increase Army National Guard full-time support at a rate of 794 AGR personnel in fiscal year 2002 and 724 AGR personnel per year from fiscal year 2003 through fiscal year 2011, with a final increment of

188 in fiscal year 2012. For the Army National Guard MILTECH, the Army seeks an increase of 487 per year from fiscal year 2002 through fiscal year 2010, with a final increment of 208 in fiscal year 2011.

For the Army Reserve, the Army seeks an increase of 482 in fiscal year 2002 and an annual increase requirement of 300 AGR for fiscal year 2003 through fiscal year 2010, with a final increment of 273 in fiscal year 2011. The requested MILTECH increase for the Army Reserve is 250 personnel per year from fiscal year 2002 through 2008, with a final increment of 146 in fiscal year 2009. I am including a table that shows these increases.

Full-time support has been the number one integrated priority list item with Joint Forces Command for the last 2 years. During fiscal year 2001, we were successful in obtaining funding for the first increment of the AGR and MILTECH ramp-up to meet required levels.

ACTIVE COMPONENT SUPPORT THE RESERVE COMPONENT

RC Full-Time Support Increases FY01 through FY12

ARNG FTS RESOURCING												
RAMP	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12
AGR Increase	526	794	724	724	724	724	724	724	724	724	724	188
MilTech Increase	771	487	487	487	487	487	487	487	487	487	208	

USAR FTS RESOURCING											
RAMP	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
AGR Increase	300	482	300	300	300	300	300	300	300	300	273
MilTech Increase	650	250	250	250	250	250	250	250	146		

Note: Adjustments to full-time support (FTS) in FY02 are based on realignment of AC support to RC training (Title XI Study)

General SHINSEKI. I am not sure what the 50 percent means.

Senator WARNER. Well, you provide regular Army personnel to the Guard units all across America.

General SHINSEKI. Yes, sir, I do.

Senator WARNER. You also have prescribed, that is the Department of the Army, how many regular Army should be given to Virginia, Maryland, Arizona, and so forth. I am told that you are only providing half of the needed personnel that your own tables of organization state that should be supplied.

General SHINSEKI. We are providing 5,000 officers and NCOs under the title that mandates——

Senator WARNER. We will go into it together, but I am going to be very, very persistent on this. We will address this issue in the current authorization bill before the Senate.

General SHINSEKI. We are meeting the obligation of the 5,000, Senator. So I need to see what the 50 percent represents.

Senator WARNER. Now to the Navy and, of course, the question of shipbuilding. Mr. Secretary, you and I have talked extensively on this. You touched on it in your opening testimony this morning together with our distinguished Chief of Naval Operations. The curve is going down to where you are at 313 ships. As we talked about this morning, it is going to drop below 300 because we are simply not building enough ships. We are looking for innovative ways to finance. There used to be the old long lead, the early procurement. We have had a dozen different names.

Mr. Secretary, what progress are you making with the Office of Management and Budget towards establishing a new type of funding whereby you can better husband that limited amount of money each year that you allocate to shipbuilding and do it in a manner

that hopefully will produce a greater number of ships as the pipeline grows?

Secretary ENGLAND. Senator, we are not having those discussions in detail with OMB at the moment. We are having discussions within the Navy because this is a problem within the Navy. If we do anything in terms of advance appropriations or whatever, it commits us to a strategy of each year funding at some significant level.

I will tell you that—and I will let the CNO speak after me on this issue, but I believe he and I do agree we definitely need to increase the rate and we need to do this at some sustained level. It is part of the business practice improvements that we can put in place.

Senator WARNER. But are you working on that the best you can?

Secretary ENGLAND. We are definitely working to do that, sir.

Senator WARNER. General Jones, a question on Vieques. This committee follows this issue very, very carefully. I have spent a considerable amount of my time on this issue, as have my other colleagues, particularly my colleague from Oklahoma, Senator Inhofe, who during my years as chairman devoted much of his time to this issue. I know the Department of the Navy, both Navy and Marine Corps service chiefs, are looking for alternatives. I think we accept the assumption that we will not likely find anything that will meet the excellent standards that Vieques has provided the Navy for 50 years, and that is a piece of property owned by the United States Navy, I hasten to remind all.

But nevertheless, our President has indicated a policy decision, which I presume that you are trying to salute and march off to fulfill. But it brings to mind that we are going to have to look at the funding for Roosevelt Roads, which is an ancillary base. In my recollection, when I was in your seat, Secretary England, that base was largely justified by the periodic use of the ranges at Vieques.

What is likely to be your recommendation with regard to Roosevelt Roads as we work our way through this problem on Vieques? If you want to lead off, Mr. Secretary, then let your two service chiefs respond.

Secretary ENGLAND. Let me just refer this to Admiral Clark because he has detail on that subject. I will just let Admiral Clark respond to that, sir.

Admiral CLARK. Well, this really falls in the category of the previous question about support structure and facilities and whether we need it or not. We absolutely need Roosevelt Roads if we are in Vieques and if we are not in Vieques it raises the question about how we put the whole structure together to train, organize, develop, and deploy a task force.

It costs us between \$200 and \$300 million a year to keep that going. The Secretary has laid out the requirement for a group to reevaluate alternatives. We have had discussions on this. My posture is if I do not need the structure to get the task done, my recommendation would be to not be supporting that kind of investment.

But we have to put together the posture we are going to use and the actual tactics, techniques, and procedures to develop and deploy these forces.

Senator WARNER. General Jones.

General JONES. Sir, I agree with the CNO.

Senator WARNER. Thank you.

Chairman LEVIN. Thank you, Senator Warner.

Senator Lieberman.

STATEMENT OF SENATOR JOSEPH I. LIEBERMAN

Senator LIEBERMAN. Thank you, Mr. Chairman.

Thanks to you gentlemen for your outstanding and in some senses unsettling testimony. I thank you for it. The chairman expressed at the beginning a thought that I want to associate myself with, which is that we are facing some real resource constraints here, which are unfortunate, because the projected surpluses were so significant and remain, notwithstanding the economic slowdown. So that some of us—I do not say this in a partisan way—regret the amount of money that we have committed for the tax cut program because it puts us in a bind in meeting and fulfilling our committee's responsibility to meet the needs of the military.

But I do think that is our responsibility and we as a committee on a bipartisan basis should go ahead and try to do that and then see if at other points along the way in this process we can figure out where to get the money and how to do it, because we are dealing here with a fundamental constitutional responsibility to provide for the common defense, as Senator Warner said.

While I appreciate the significant increase that the administration has recommended for defense, as I said to Secretary Rumsfeld last week, and I say with even more force today having heard your testimony, because you are on the line, we are not giving you enough. We have to find a way to do that.

As I look at the numbers in the various budgets, in the Army budget in real terms procurement and research and development (R&D) seem to be, by my calculation, down because Patriot Advanced Capability-3 was transferred from the Ballistic Missile Defense Office (BMDO) to the Army, adding \$714 million in procurement and \$107 million in R&D to the Army number. So procurement actually may be down by \$500 million and R&D may be down by \$600 million.

In the Navy budget, procurement is down by \$1.9 billion; family housing is down by \$100 million in the Air Force budget. Most troublingly, the R&D picture is not getting better. It is down again this year, and it is only at 2.1 percent of the Air Force total obligational authority, which is well under the 3 percent that DOD has set as a goal.

The supplemental appropriations bill is on the floor now. I am going to be joining with Senator McCain and two others to introduce two amendments that would increase funding for the Department of Defense, one by \$2.74 billion, the other by \$846 million. These are largely driven by what we understand to be requests, quite justifiable, that the service chiefs have made for supplemental funding.

I hope we can convince our colleagues to take first steps in the direction of giving you what you need. Maybe I should start there as an example. For instance, one of the items that we are adding is procurement of ammunition for the Army at the rate of \$14 mil-

lion. I know it would be hard for you, based on the generality, to indicate, but I wonder, General Shinseki, if you could tell us what you would do with that \$14 million for procurement for ammunition for the Army?

General SHINSEKI. Well, Senator, we traditionally have an unfunded requirement for ammunition, because the ammunition statement is against a war to be determined at a future date. We procure about a billion dollars in ammunition every year. Until recently, we carried over the Program Objective Memorandum (POM) about a \$9.5 billion critical war reserve shortfall—against which we programmed \$2 billion.

So we have reduced that shortfall. But that shortfall is one that we have carried and I think we have addressed in terms of our available dollars and suitable risk for requirements that are to be determined in the near future.

There are stockpiles that we do maintain. When we are unable to use them, those ammunition stockpiles, in a timely manner, they outlive their shelf life. We then have to go through the process of demilitarization, which we spend about \$100 million a year doing. So it is a balance of getting it right.

Senator LIEBERMAN. So that is the purpose that Congress should appropriate an additional \$14 million for ammunition? That is the purpose for which you would use it?

General SHINSEKI. I have a priority list of the kinds of ammunition, probably mostly in the precision arena, but I will provide that for the record.

[The information referred to follows:]

PROCUREMENT OF AMMUNITION

The Army would spend the additional \$14 million procuring 135,000 Modular Artillery Charge Systems, as the most pressing unfunded ammunition requirement. These new modular propellant charges are critical to support both war reserves and training.

The Modular Artillery Charge System, a replacement system for 155 millimeter propelling charges, offers simplified logistics compared to traditional bag propellant systems. Simplified logistics directly support Transformation, reducing the logistics footprint and making the Army more agile and lethal.

Senator LIEBERMAN. Thank you.

Admiral Clark, Navy procurement, by my calculation, at \$24.6 billion is down by \$1.9 billion. Am I reading that right?

Admiral CLARK. I do not have the exact numbers in front of me, Senator, but you probably are. Last year I testified before the Readiness Committee about the level of investment we had to have in acquisition to sustain the Navy that we needed and I suggested it was somewhere in the neighborhood of \$34 billion a year. There is a delta—

Senator LIEBERMAN. Again, excuse me, but on that basis I accept your number. You are the Chief. We are at \$24.6 billion?

Admiral CLARK. That is correct.

Senator LIEBERMAN. So we are almost \$10 billion below that.

Admiral CLARK. I am on the record, I have been, that we have to do something on the acquisition accounts. That is the point I tried to get forward in my statement. If you compare the 2001 and 2002 and try to analyze the difference, fundamentally you will see

that we purchased an aircraft carrier in 2001 and that creates a spike.

Senator LIEBERMAN. Sure.

Admiral CLARK. This is the point, though, that I have tried to make with regard to the requirement to better partner with industry, that industry cannot size itself properly. We have unique industrial bases that support the defense structure of the United States and with this sine-cosine curve kind of investment structure it is not the economic way to go at it.

Senator LIEBERMAN. General Ryan, let me ask you about that number for research and development, which concerns me, and I would guess it concerns you. How can we get to the future Air Force that I know you want with research and development funding at that level?

General RYAN. Our S&T funding, science and technology funding, in the current budget that we presented for Air Force is up to 2 percent of our total TOA this year, which is up from last year's budget we presented. This committee and others helped us increase the funding for our S&T up to approximately \$1.5 billion last year. We submitted a budget this year at \$1.4 billion as we prioritized.

But I agree with you, we must not eat our seed corn and S&T is the essence of our future readiness.

Senator LIEBERMAN. Thank you all.

My time is up, Mr. Chairman. I hope that we will be able to work in this committee on a bipartisan basis to respond to the statement of need from the secretaries and the chiefs and then be advocates for them through our authorization bill. I thank you.

Chairman LEVIN. Thank you, Senator Lieberman.

Senator Inhofe.

STATEMENT OF SENATOR JAMES M. INHOFE

Senator INHOFE. Thank you, Mr. Chairman.

I had an experience yesterday I thought I would share with this committee. I was flying my plane from Oklahoma to Washington and I had with me a guy named Charles Savett, who is one of the most highly decorated pilots from the Vietnam era, having flown 288 missions. Senator Warner, what he told me, he said: You can argue with the war; it was highly controversial, but when they were in combat, he said, the one thing we had the assurance of is that everything we were using was better than what they were using—the F-100, the F-105's, F-4's. You can say the same thing for the Navy; the A-4's and A-6's were all better than the equipment that was being flown by the adversaries at that time.

I think most of the American people probably believe that is still true today. But it is not true today if you look at our air to air vehicles. One of the things I like to do each year, as I have for the last 15 years, is go to the air show over there and see what the competition is doing and see what is on the market that the Chinese and other potential adversaries are buying. Air to air vehicles, the F-15 is the best that we have, and they have the SU-27's that are on the market today. Air to ground, the F-16's that we have, compared to the SU-30s that they are using right now in many areas, are inferior in terms of range, in terms of detectable range, which means they can detect us before we can detect them.

So we do not have the best of everything right now. Look at the double digit SAM's that are out there on the market today that are putting the lives of our pilots in danger because they are able to reach them now. This was not the case before. They have this type of equipment.

General Shinseki, look at the artillery right now, the Paladin. I have the chart that shows that the British, the Russians, the Africans, and the Germans, if you use as a comparison the rate of fire and the range, are better than we are right now in terms of the Paladin. This is the case for the Crusader, of course.

I know that we are looking at different forces and how we are going to change the force structure, but in terms of rate of fire and range we are already inferior today to what is on the market and anyone is able to buy.

So let me just real quickly try to—first of all, General Ryan, do you agree with my assessment of where we are competitively with our modernization program?

General RYAN. Absolutely, sir. I think the equipment that is being produced worldwide surpasses our current equipment. What makes us good is the fact that we have great people operating that equipment.

Senator INHOFE. Well, then you are looking at—the obvious answer to this, to certainly the first part, the deficiencies that I was outlining, is the F-22. You have been very outspoken, both of you have been, on the necessity of that F-22. As it is right now, are 339 aircraft enough to meet the Air Force's needs?

General RYAN. We have used 339 as a number that would fit underneath the caps that we had imposed coming out of the last QDR, Quadrennial Defense Review. We are relooking at the number this year. That does not recapitalize all of our F-15 air to air fleet and falls far short of that.

We also believe that the aircraft has some capability in the future to be used as replacements for things like the F-15E and the 117.

So to answer your question, I think, built in numbers, the F-22 will be a great addition, not just to the air to air fleet, but our air to surface capability also.

Senator INHOFE. Good, good.

Secretary Roche, I will just ask for a real quick response on this. The administration's budget proposal includes \$922 million in assumed savings from management reform initiatives, including \$140 million in depot maintenance savings if Congress approves a waiver of the 50-50. We are not talking about the national security waiver. We are just talking about the waiver.

We have been asking for the analysis of that. Do you have that?

Secretary ROCHE. What we would like to do, Senator, is to come back to you with a definition of "capacity." That would trigger only if our ALC's were at 100 percent capacity. That is the only reason that would trigger.

Senator INHOFE. How would you define "capacity" in coming to that conclusion?

Secretary ROCHE. We would like not to play games as we define "capacity." Right now our view is that which exists today on one shift—no special games.

Senator INHOFE. For instance, if you had three ALC's right now operating at 100 percent capacity at only one shift a day, if you had two shifts they would be at 50 percent capacity; is that correct?

Secretary ROCHE. If that was the definition, yes. In fact, at one of the ALC's I know that they do weekend shifts and that they contract out that weekend shift, and that has worked very well, and that is at Warner Robins. It has worked out very, very nicely.

Senator INHOFE. Thank you very much.

General Shinseki, getting back to the Crusader, I wanted to get this in before this first round expires for me. One Crusader has the firepower of three Paladins, but when you get into sustained fire or after the first 3 minutes it is about ten times. Can we continue to be in the inferior position that we are today and, if not, what is there out there other than the Crusader that would take care of that problem, that deficiency?

General SHINSEKI. Well, Senator, coming out of Desert Storm we realized that in terms of artillery we were carrying significant risk. We were outgunned, outranged, and outmassed by other formations. The reason we did not pay a big price to that difference, which I would categorize as risk, was the failure on the other side to be able to employ their artillery the way we would have.

So coming out of Desert Storm, we added to that risk. Not only were we outgunned, outmassed, and outranged, but we took 25 percent of our artillery systems and retired them in order to husband those resources for future capabilities. But we went beyond that. We also retired 25 percent of our direct fire systems, our tanks and our Bradleys, and reduced by 25 percent the number of platforms inside each battalion.

We invested those monies in future capabilities that ultimately became known as Crusader and directed our efforts at digitization to give us better situational awareness so we could fight our systems in an integrated fashion.

We are on the verge of fielding Crusader, and Crusader is an important aspect of filling that risk we have incurred.

Senator INHOFE. Thank you, General.

I know my time has expired, Mr. Chairman. I have one last question, just yes or no. General Jones, if I wrote this down right, I do not think it was in your submitted statement, but I think you said that you agreed with Secretary Rumsfeld that we should only replace things when we have something better to replace them with. Is that an accurate—

General JONES. That is correct, sir.

Senator INHOFE. Do you agree with this, Secretary England?

Secretary ENGLAND. Yes, I do. I think that is definitely the case for our weapons systems, sir.

Senator INHOFE. Does that include Vieques?

Secretary ENGLAND. No, sir, it does not.

Senator INHOFE. General Jones, do you think that includes Vieques?

General JONES. The requirement for training—

Senator INHOFE. Yes, sir.

General JONES.—does not take a back seat to programs.

Senator INHOFE. Thank you very much.

Thank you, Mr. Chairman.

Chairman LEVIN. Thank you.

Without objection, I will ask that a statement by Senator Thurmond be inserted into the record and let me read the order here that I will be calling on senators. We have really an extraordinary attendance here this morning, which is a real tribute to you all and to the issues that we grapple with. But next will be Senator Reed and then Senator Allard, Senator Cleland, Senator Collins, Senator Carnahan, Senator Bunning, Senator Sessions. Senator Akaka is here now. After Senator Bunning would be Senator Akaka, and then Senator Sessions and then Senator Roberts.

That is the present order. Now, some may leave and some may come and switch for that matter, but that is where we now stand. Senator Reed.

[The prepared statement of Senator Thurmond follows:]

PREPARED STATEMENT BY SENATOR STROM THURMOND

Thank you Mr. Chairman:

Mr. Chairman, I join you in welcoming our Service Secretaries to this, their first official hearing before the committee. We have great expectations on their ability to bring about change in our Armed Forces and look forward to working with them as they take up the challenges of their office. I also want to extend a welcome to our senior military chiefs. All of them are well known to this committee and are highly respected for their distinguished service to our Nation.

Mr. Chairman, I have been a member of the Armed Services Committee almost 42 years. During these years, I have witnessed the many positive changes that have transformed our Armed Forces into the world's most powerful and professional forces. Despite this achievement, the military services must be prepared to meet the challenges of the new threats posed by international terrorism, weapons of mass destruction and missile proliferation. Therefore, I fully support the transformation plans for each service.

Mr. Chairman, I believe the President's budget amendment, although less than many of us had hoped for, is a good start to provide for the transformation of our Armed Forces. With this amendment, defense will realize an increase of more than \$38 billion over the fiscal year 2001 defense budget. More importantly, the increase will provide real benefits in terms of improved family housing, readiness, and research and development. It will also provide robust funding for a National Missile Defense program which I consider the most urgent requirement for our Nation's security.

Mr. Chairman, despite all the positive aspects of this budget, I believe it does not adequately fund the modernization and transformation of our Armed Forces. It is still short of meeting the standard of revitalizing our infrastructure every 67 years. It will not close the pay gap between the private sector and the military. More importantly, it assumes almost \$1 billion in savings or efficiencies that are not going to be realized.

The coming months and years will challenge the expertise and will power of each of our witnesses as they struggle to prepare our forces to fight in an environment that is new to all of us. I believe we are fortunate to have men of their caliber in the key positions which they occupy. They have my support, and I expect that they will have the bipartisan support of this committee.

Thank you, Mr. Chairman.

STATEMENT OF SENATOR JACK REED

Senator REED. Thank you, Mr. Chairman.

Let me begin by associating myself with Senator Lieberman's remarks. I believe that the mutual dilemma we all have, both the members of this committee, the service chiefs, and the service secretaries, is that the budget Congress passed did not explicitly or adequately address the needs of the Department of Defense. Those needs were secondary to the tax cut.

The very legitimate and compelling demands you make today are not able easily to match with resources since they have already

been committed. So the budget we are looking at may be enough to keep you going, but it is not enough to get you ahead. That is the dilemma that we all have to face going forward.

Having said that, let me, if I may, ask more detailed questions. Admiral Clark, I understand that in this budget there is \$110 million set aside for the SSGN conversion. Have you made a decision as to the number of boats that would be converted? If not, when will that decision be made? Also, could you roughly describe how the funding would be used, \$110 million?

Admiral CLARK. I sure can, Senator. Question number one: A definite decision as to the total numbers. We put—frankly, this was something Secretary England and I worked together on in doing what we thought was the best we could do for the procurement accounts as we closed this down and made recommendations on the amended budget, that the money put in there would do advanced planning and design work and would take care of two Tridents and that as we continue to examine the program in the course of the next year that we could potentially pick up two more.

So that was our thinking. How the money will be spent specifically, design, planning work.

Senator REED. In your conversion, will you try to make these submarines outside the accounting rules of START II, which I assume is a more expensive proposition?

Admiral CLARK. That is an issue that has to be dealt with, whether they will be START accountable or not, and that is not a decision that I get to make. The final bill will of course be dependent upon that, and that decision is not made yet.

Senator REED. Thank you.

Secretary White and General Shinseki, the budget briefings on the Army budget suggest that there might be a significant deterioration in the momentum for transformation, given your other demands. In fact, if one looks forward, there is a real danger that, because of budget concerns rather than strategic concerns, the Army would be forced to cut back its force structure.

Could you elaborate on those concerns or the pace of transformation, Mr. Secretary?

Secretary WHITE. Well, first of all, Senator, in the fiscal year 2002 budget, we have made funding the S&T effort to support Transformation a priority. We have fully funded that and gotten support, both from Congress in the past and from the Secretary as we go forward. So we are going to maintain the momentum of bringing on both the Interim Brigades and the Objective Force as we have laid it out.

Where we have taken the shortfall is in the sustainment of the Legacy Force, as it is called, the existing force in the modernization and the recapitalization of that.

The second part of the question, having to do with force structure, is a decision that will be made as a part of decisions on the strategy and where that is headed, and the Secretary has not made those decisions yet and we will just have to wait and see how that comes out.

Senator REED. General Shinseki, do you have any comment?

General SHINSEKI. I would only add, in agreement with the Secretary, that if you think of the three efforts that we have de-

scribed—Army Transformation as being this interim effort, Interim Brigade Combat Teams, we have funded that requirement. We have also funded aggressively our investments in S&T for that future Objective Force capability.

In terms of the Legacy Force, the current force that we have today, that is going to be the force that we go to war with for the next 10 years. We have said we need to do something about recapitalization of those systems, as well as taking care of our infrastructure in terms of revitalization.

Given the profile of where Army soldiers serve today in my opening statement, nothing has changed in the last 10 years about where we find Army soldiers deployed. The requirement for the structure to support those deployments is real and if the strategy changes, of course, that is subject to review.

Senator REED. Thank you very much.

Thank you, Mr. Chairman.

Chairman LEVIN. Senator Allard.

STATEMENT OF SENATOR WAYNE ALLARD

Senator ALLARD. Thank you, Mr. Chairman.

I am concerned about whether we are going to have the capacity and the flexibility to support our intelligence and communications requirements over the next 5 to 10 years. This budget that has been proposed—are we addressing the shortfalls in the satellite intelligence and communications infrastructure that we have had in this budget? Please elaborate a little further about whether you think we will be meeting those needs in 5 to 10 years down the road.

I would like to address that question to General Ryan.

General RYAN. Senator Allard, quite honestly, the appetite for communications, particularly secure communications, is huge. Trying to keep up with that demand has put a great strain on our capability both in space and terrestrially, quite honestly, to modernize at a rate that the demand is out there for. So no, we are struggling with communications. I think all of us are.

Senator ALLARD. Are we at least beginning to address that issue in this budget?

General RYAN. Yes, sir. We have funding for our satellite constellations for communications, which is probably not completely adequate, but it is good funding considering the budget levels that we are at.

Senator ALLARD. The military services must transform into a force that is more flexible and more joint and more capable of providing military power to the President that is relevant in today's job. I would like to hear from each one of the chiefs just a comment on that, on how your service is responding to that requirement. We will start maybe with General Shinseki.

General SHINSEKI. Senator, I would use the Army's efforts over the last 2 years to begin transformation of what it has described as the force we carried forward or inherited from the Cold War designs that we applied and look forward to the 21st century and, if I could use the term, see constant whitewater. We have begun the process of adjusting our thinking about how we organize, how we

describe our doctrinal responsibilities, to accommodate where we are headed there.

I think that what we have described is a relevant force for the future and a way to get there, labeled the three vectors in Army transformation: an Interim Brigade Combat Team concept that, applied to today's Legacy Force, gives us capabilities out for the next 10 years as we have the time to design that future force we were describing.

As I indicated earlier, we have applied resources against all three of those efforts. The initiative in most need of support right now is the Legacy Force initiative in terms of recapitalization and we believe that is where we have put as much energy as we could in this budget.

Senator ALLARD. Admiral Clark.

Admiral CLARK. Yes, sir. Well, we oftentimes talk about stealth—about transformation in terms of platforms. Excuse me for saying “stealth.” I was thinking about the characteristics I want to describe.

I think that when I look at my Navy, I have 60 to 70 percent of the hull forms that I am going to have 15 to 20 years from now. So is the Navy going to be the same 15 to 20 years from now? Well, it is nothing today like it was even 10 years ago. So when I talk about transformation I talk about the characteristics. It is stealth, it is lethality, precision, it is about command and control, superior knowledge, and with that for us it is network-centric warfare, investing in the channels that—by the way, General Ryan talks about the insatiable appetite. It is about a different way of fighting the war and it is about being smarter than the enemy and it is about having that edge that Senator Inhofe talked about, and it is about speed of response and reach.

In every area, I can give you programs that we are investing in for the future. That is the way we are transforming our Navy. It involves DD-21, it involves JSF, it involves programs that we cannot talk about in an open hearing, that allow us to take it to the enemy.

Senator ALLARD. General Jones.

General JONES. Senator, it is an exciting period to be in because it really is crossing the bridge between the 20th century and the 21st century. The 20th century force structure was based on mass and volume. As the CNO pointed out, the 21st century forces will have characteristics of speed, not only in being able to get to where we need to get to, but also speed in decisionmaking. It will be stealthier; there will be much more precision involved in these forces. It will be more lethal, as the CNO pointed out.

I think if we do it right they will also be sustainable from greater distances. I think that piece of it is equally important, if not more so, than the others. We will get into some asymmetric advantages that will, as a result of our world leadership in technology and the development of those technologies, allow us to move away from this mass and volume twentieth century characteristic to perhaps a smaller force, but one that is certainly much more capable and will have tremendous aspects of cohesion and will be able to delegate down to unbelievable levels of responsibility tremendous missions.

The captains of tomorrow are going to be excited about serving in this force if we do it right.

Senator ALLARD. General Ryan.

General RYAN. Sir, I think you hit on it in your previous question also and that is that, though we will have some excellent capabilities in the future and all of the services are I think tending toward stealthy, long-range rapidly deployable and sustainable forces, what will pull that together for us will be our ability to command and control the force, to have the knowledge, the vigilance and knowledge of what is going on in a particular area to apply the force properly.

That is a function of a new way of doing business, reaching back to many, many different pieces of our military capability for analysis and bringing it forward to make it actionable. I think that is where the revolution in military affairs is headed.

Senator ALLARD. Mr. Chairman, I see my time has expired.

Chairman LEVIN. Senator Cleland.

STATEMENT OF SENATOR MAX CLELAND

Senator CLELAND. Mr. Chairman, thank you very much.

Thank you, gentlemen, for your service to our country. I am fascinated about this discussion here at the end of Senator Allard's question about the whole concept of transformation. I agree with General Ryan that the whole military is going through this transformation.

Over the holidays and the Fourth of July break, I had the pleasure of reading General Wesley Clark's book "Waging Modern War." How we go to war now is so different than even going to war in terms of Desert Storm. The emphasis on massive air and sealift, the ability to respond quickly, flexibility, the use of precision weapons, massive amounts of air power, the ability to deploy the Apaches and so forth and take it to the enemy from a long range point of view, on the ground and in the air.

Wow, what an exciting time to be a young officer in the American military. But I am afraid that this budget that I review grossly underfunds our ability to do that. The budget does not procure enough ships to sustain a 300-ship fleet. It does not procure enough aircraft to halt the aging problem that adds to flying hour costs and safety concerns. It does not even procure enough precision guided munitions to address the shortfall in our Reserves. That is simply unacceptable.

Many say that we simply have deferred the procurement decisions until the next budget, after the defense review. That is all fine and good, except that the outcome of the strategic review is not going to change the fact that we need adequate numbers of ships to meet worldwide commitments and we will need safe aircraft for our young men and women to fly. We will need an adequate stockpile of precision munitions to be ready when necessary to protect our vital interests.

These things have been deferred. They have been deferred in some measure so that we can accelerate on a range of missile defense programs that have not yet been proven to work and that raise significant issues regarding our international commitments under the ABM and other treaties. An extra \$2.2 billion by some

accounts has actually been allocated in this budget to the \$6 billion that is already going to these programs.

By "these programs" I mean the missile defense programs. No one has come to Congress with a threat briefing, classified or otherwise, that justifies accelerating these unproven programs by literally billions of dollars. I cannot in good conscience support it when I know of many legitimate defense requirements which you have articulated here and those I have mentioned above that do require urgent attention.

One of those decisions about our future military has to do with the B-1 bomber decision, Secretary Roche. Just some questions. You have been kind enough to spend some time with me and other members of this panel with regard to this decision. I look forward to seeing you down at Warner Robins on August 8 and we will review some of these decisions in more detail.

But I would like to ask you, do you have in your mind any concept of what will happen to the Guard personnel when the bombers are removed from Georgia, Kansas, and Idaho? Any thoughts about that at this point?

Secretary ROCHE. The Guard issues, Senator, I think are principally in Georgia and in Kansas. Our goal is to not do any harm to the Guard, but to do good for the B-1 fleet by modernizing and by transforming them without having to come back and ask for more money. We would like to try to integrate and look for ways to use the Guard. For instance, we would like to consider an associate squadron for the Joint STARS. We would like to consider Warner Robins for some of the other things that are coming along. The same with Kansas. In terms of Kansas, we would like to work with the Guard there to find out what is best.

As I pointed out to Senator Roberts, there is an engine remanufacturing facility that is run at the base which is really quite superb and there is no reason for it to go away. We are trying to both be efficient and to have a better fighting force with the B-1 bomber and consistent with our long-range standoff aircraft, which now we see as a good strategy that we feel very comfortable being able to discuss with you, sir.

Senator CLELAND. As you evolve the strategy, Mr. Secretary, continue to keep in mind not only the great investment in terms of hardware and software in these bases that maintain the B-1, but the great service of the Air Guard as well.

General RYAN, were the expenditures on precision guided munitions during the Kosovo air campaign higher or lower than projected at the outset of the campaign?

General RYAN. I have to say that there was no projection stated on the length of the campaign. There were those who opined that the campaign would only last 2 or 3 days and Milosevic would roll over and it would be over. There were others who said it is going to go on for a while. Seventy eight days into the operation, it was called off, with Milosevic rolling.

The expenditure of precision weapons in that engagement was very, very large. What offset it somewhat was our bomber fleet that went in using smart airplanes with dumb bombs and doing great damage to some facilities and infrastructure that the Serbs were using during that time. So it is hard to say whether the amount

of precision munitions used was within a calculation because there was no calculation base, but we certainly used a lot of them and fell short in our inventories, and we are still short in our inventories.

Senator CLELAND. That was my next question: Are we still short of precision weapons?

General RYAN. Yes, sir.

Senator CLELAND. Thank you very much.

Admiral Clark, thank you very much for your service and thank you for the conversion of two Trident submarines to more unconventional forces and use. Of course, the Navy I am sure would like to have the money to do four of these. What are some of the advantages that you see in the conversion of maybe a total of four Tridents to the mission that you have articulated?

Admiral CLARK. Well, not only will an SSGN Trident give us the ability to do massive long-range strike, but I look at this as a space-weight-volume issue for future transformations. We get real sensitive real quick here, Senator, but if we look at future systems that are possible where space and weight and cube are going to be required, I see the potential of this platform to be significant. I would be happy to talk to you about this in a closed forum.

Senator CLELAND. Thank you very much, Mr. Chairman.

Chairman LEVIN. Senator Collins.

STATEMENT OF SENATOR SUSAN COLLINS

Senator COLLINS. Thank you, Mr. Chairman. I think it is important to note for the record that the Department inherited serious shortfalls in virtually every account, making it very difficult for the new administration to correct all of these deficiencies in a single year. As a result, we have some very serious problems to solve.

Admiral Clark, you testified this morning that we need to build nine ships a year to sustain the QDR level. Similarly, a senior DOD official recently told me that it would take between \$11 and \$12 billion per year just to sustain, not to grow but just to sustain, the current naval force structure. So we have a long way to go to recapitalize our naval force structure.

In that regard, Secretary England and Admiral Clark, I want to get comments from both of you on three issues that offer the promise of helping the Navy recapitalize the fleet in the most economical way possible. The first is greater use of multi-year procurements; the second is more of a focus on life cycle costs; and the third is an exploration of the use of advanced appropriations.

I want to first comment on multi-year procurements and get you to respond to that. I may have to go to the other two issues in a subsequent round. This committee took the initiative last year in extending the Navy's authority to procure DDG-51 Aegis destroyers at a rate of three ships per year through fiscal year 2005. The Navy has previously testified that using the multi-year procurement approach has saved more than a billion dollars compared to annual procurements of the same ships and that multi-year procurements have introduced a degree of industrial base stability.

So my question to Mr. Secretary and Admiral Clark: Congress has provided the Navy with clear legal authority and encouragement to buy as many as 12 DDGs over the next 4 fiscal years at

a rate of 3 per year through a follow-on multi-year procurement. Would you agree that sustaining the 3-ship DDG-51 procurement rate at a minimum would serve both the Navy's interests and be the most economical way from the taxpayers' and budget perspective of starting to recapitalize our fleet?

Secretary England?

Secretary ENGLAND. Senator, an additional DDG-51 was put in the 2002 budget so we could exercise that option, which is a very good price as part of that other ship that was on the multi-year. So we did exercise that to get three of them this year in the 2002 budget. I would certainly agree that multi-year is an approach that provides stability for the industry and also provides economy of scale for the Navy. So certainly we would look to partner and to continue to do that in the future.

So certainly I would hope that we are going to be able to continue to do that.

Senator COLLINS. It essentially allows you to buy three ships for the price of two if it is carried out and executed effectively and, given the huge shortfall that we face in shipbuilding, it seems to be an approach that is extremely economical and helps us resolve the underlying problem of the declining number of ships.

Secretary ENGLAND. Definitely. Any way that saves money for us, we can utilize that money in other procurements or for additional ships. Certainly we look favorably upon that. So definitely we are interested in multi-year and continuing to do that, Senator.

Senator COLLINS. Admiral Clark.

Admiral CLARK. Well, here I am, Senator, sitting in uniform and wanting more ships, and so we talk about three a year. I sure am happy to sign up for—I said I need nine. Three a year would be great.

The point on multi-year, I want to reinforce the Secretary's comments, Senator. One of the things I am most pleased about in this budget, the amended budget, is that we were able to pick up that extra DDG. I believe that this is consistent in what I was trying to get to in my initial comments. This is the kind of partnering that we have to do with industry. The reason we save money is because industry can now project the work force it needs and get its industrial plant lined up the way it needs to.

This is the kind of thing that we have to do. Secretary England also made the point that we have to commit to, I believe, a more consistent investment posture across the years to help in that partnership.

Senator COLLINS. Admiral Clark, I would now like to go on to the issue of total ownership costs or life cycle costs. The Navy has testified on several occasions that the key to reducing total life cycle costs while continuing to provide combat capability to our naval forces is to invest in research and development for our future naval platforms. Would you please elaborate on the research and development investments that are included in the fiscal year 2002 budget amendment that could reduce total ownership costs associated with current and future naval platforms?

Admiral CLARK. Well, of course the biggest area in our—there are two areas that are affected here principally. It is the investment in reducing life cycle costs that are part of the DD-21 R&D

effort, and obviously a major cost associated with any combat system is the manpower associated with it. So a principal piece of that is the reduction in manpower.

The second thing I would—actually, there are at least three. The second thing is the R&D in the Joint Strike Fighter, and that is all about reliability and maintainability. I believe that is—for all of the things that JSF will bring to us in the future, the ability to reduce life cycle costs because of the specifications laid on for reliability and maintainability are to me among the most significant.

Then the third piece that I would talk about is an effort we have in S&T, and that S&T work is specifically about hull forms and potential new ship types that will allow us and lead us to lower life cycle costs.

Senator COLLINS. Thank you.

My time has expired.

Chairman LEVIN. Thank you.

Senator Carnahan.

STATEMENT OF SENATOR JEAN CARNAHAN

Senator CARNAHAN. Thank you, Mr. Chairman.

General Ryan, my home State of Missouri is the proud home of the 131st Fighter Wing, recognized as the best F-15 wing in the United States Air Force. This honor reflects the new concept of total force because the 131st is a National Guard unit. Whether they are patrolling the dangerous skies of Iraq or bringing disaster relief to Honduras, these Reserve components are serving alongside our Active Duty personnel. I certainly hope the budget suitably addresses the needs of our Reserve components as well as our active components.

I was wondering if you would elaborate on our Reserve components' contribution to the U.S. air superiority missions abroad.

General RYAN. Senator, we in the Air Force integrate our Guard and Reserve Forces in with our Active-Duty Forces in as seamless a way as possible. We ask our Guard and Reserve Forces to share our operations tempo, not just with air superiority, but across-the-board into the support areas. It is not unusual to go to, say, Incirlik, Turkey, and find the National Guard flying air superiority missions intermixed with our Active Duty flying support missions. It is that way across our Air Force.

So we are very, very proud of the ability to integrate our forces and we are very, very dependent upon our Guard and Reserve Forces for our OPTEMPO and our readiness.

Senator CARNAHAN. Following up on that dependency, I might ask Secretary Roche the next question. The F-15 Guard units have identified an engine upgrade as the most pressing need. Does the fiscal year 2002 defense budget suitably address our shortfalls and are there plans to use F-16 engine parts to provide for the F-15 inventory?

Secretary ROCHE. Senator, I am not familiar with that particular issue. If General Ryan is, I would ask him to answer. If not, we will get back to you for the record, ma'am.

General RYAN. I will take it for the record, too, ma'am, if that is okay.

[The information referred to follows:]

The current ANG F-15 fleet consists of mostly A and B models:

- The training unit at Klamath Falls has 12 C/Ds, 6 Bs.
- All other units have 108 A/Bs (99-As/9-Bs).
- All aircraft have the PW F-100-100 engine.

The ANG F-15 modernization priorities do not include an engine upgrade for the A/B models. The annual prioritization process listed an advanced Interrogator Friend/Foe as the #1 priority. The list is developed at the unit level and approved through the Director of the ANG.

The active duty F-15 modernization program includes engine upgrades for the C/D models. The current funding plan includes continued engine upgrades although budget reductions have decreased the rate at which the engines are being upgraded. The fiscal year 2002 budget does not have sufficient funds to address the C/D shortfall. Higher budget priorities continue to pressure the remaining funding. The engine upgrades are listed on the active duty unfunded priority list submitted to Congress on 6 July by CSAF.

The ANG will inherit the upgraded engines as the active C/D models migrate to the ANG inventory. There is a single engine Systems Program Office (SPO), making repair an engine type issue, not an aircraft origin issue. The 220E upgrade kit works in both the F-15 and F-16 and the kits are bought without designation as F-15 or F-16.

The ANG units have an ever-increasing requirement to modernize the subsystems of the F-15 to maintain the level of combat capability required by the AEF. Upgrading the engines is reviewed annually and prioritized.

- The cost of upgrading the entire fleet is approximately \$500M.
- Partial upgrades create major logistics challenges as all six combat coded F-15 units contribute to the AEF #9 force.

Senator CARNAHAN. I might ask you as well, Secretary Roche, that during the first 9 weeks of the Kosovo operation our B-2's flew 45 sorties out of Whiteman Air Force Base and in this time they destroyed 90 percent of their targets on their first strike. I think the B-2, all of us can say, certainly has a very successful track record.

Would you comment on the administration's commitment to B-2 upgrades?

Secretary ROCHE. Yes, ma'am. I spent 18 years of my life cleared to level 4 on the B-2 and it is a superb airplane. We are committed to upgrading it. The first upgrade we want to go to is JDAMS, which will take it up to 80 weapons per flight. These will be precise and can be used to get close to a target because of the B-2's stealth. In certain conditions we may need F-22's to be around to make sure no one shoots it down.

Then the next step past that is what is called the small precise weapon, the small diameter bomb. There we can get up to numbers in excess of 300 per airplane, so that we take a fleet of 21 aircraft and the lethality of those 21 aircraft will grow dramatically over the next 10 to 15 years.

Senator CARNAHAN. Thank you.

Then a final question here of General Shinseki. I believe it is important to be able to treat our soldiers on the battlefield in the event of a chemical or biological attack, and the Army has sought to procure chemically and biologically protective shelters that are specially designed, rapidly deployable, mobile medical aid stations. I was wondering if you would be able to comment on our preparedness to treat military forces on a contaminated battlefield.

General SHINSEKI. Well, Senator, this is one of the areas that we constantly train to and the procurement of this kind of equipment reflects what we learned out of that training, that we need capabilities we do not have. If you would like, I would be happy to pro-

vide for the record specifically what that program buy is about in terms of those specific shelters.

For all the services, but particularly for the Army, operating in a contaminated environment is a key part of our training programs.

Senator CARNAHAN. Do you feel that there are any improvements that need to be made at this time?

General SHINSEKI. I think we have made in investments what we have declared as important. We have go-to-war stocks in terms of chemical equipment set aside for go to war, as well as chemical equipment that we use for training. The program buy information for these particular shelters, I think probably would provide you a better answer for the record.

[The information referred to follows:]

CHEMICAL AND BIOLOGICAL PROTECTIVE SHELTERS (CBPS)

The Army trains with the assumption that we will fight on a contaminated battlefield and will require the capability to treat casualties on that battlefield. The CBPS is a critical component of that capability. Although the Army is currently the only Service with a requirement for the system, the CBPS is funded through the Joint Nuclear Biological Chemical Defense Program and a Defense-wide appropriation. The CBPS is the primary collective protection shelter used for echelon I and II medical treatment facilities and forward surgical teams. The system provides a rapidly deployable mobile medical treatment capability to treat casualties in a nuclear, biological, chemical environment. It is mounted on a high-mobility multipurpose wheeled vehicle and is fully operational by a crew of four within 20 minutes. This capability does not exist in the field today.

The CBPS contract was first awarded in February 1996, and the Army has exercised several options under the contract to maintain production. There are 33 systems currently located at Pine Bluff Arsenal and at the contractor's facility. An additional 80 systems are currently under contract, and we plan to field the first 122 CBPS systems in the very near future. The Army also plans to complete a type classification standard decision in September 2001 and exercise another option under the contract in January 2002.

Senator CARNAHAN. Thank you.

Thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Carnahan.

Senator Bunning.

STATEMENT OF SENATOR JIM BUNNING

Senator BUNNING. Thank you, Mr. Chairman.

I sit here in amazement because of the questions coming from one side and the other. For 8 solid years the defense budget declined. How many military personnel here were at this table, any of them, during the last 8 years? [A show of hands.]

General RYAN. 4 of the last.

General SHINSEKI. The last 2.

Senator BUNNING. Did you make the point that you were a little short in your budgets before this committee at that time?

General RYAN. Yes, sir.

General SHINSEKI. In testimony last fall before this committee, as I recall, the Army's statement of needs on finance requirements—

Senator BUNNING. What about the ones in the prior 8 years? How much more are you now receiving in your military budgets than you were in the last 8 years? Take 1993, 1994, 1995.

General RYAN. I can partially answer that.

Senator BUNNING. Thank you.

General RYAN. 1996 was the bottom-out year of the drawdown of our forces and the budgets from 1996, 1997 were fairly level. I have to tell you that we—

Senator BUNNING. Only because Congress in their wisdom put more money back into the request that came from Pennsylvania Avenue.

General RYAN. We did get substantial help from Congress during those years to shore up our budgets.

Senator BUNNING. I just want that to be in the record.

General Shinseki, you brought up the fact that we were technologically inferior during the Gulf War. Is that an accurate statement?

General SHINSEKI. I was referring specifically to the capabilities of the adversary's artillery systems.

Senator BUNNING. Just the artillery? General Ryan, what about the military aircraft?

General RYAN. During the Kosovo conflict we were able to, quite honestly, overwhelm a smaller force. What we were unable to do and lost two airplanes because of is coming to grips with how to defend against the surface to air missile threats that were in that area.

Senator BUNNING. Even with stealth?

General RYAN. Even with stealth. In fact, we lost one stealth aircraft. It was a lucky shot, but we lost a stealth aircraft.

Senator BUNNING. It was just a barrage that brought down that aircraft?

General RYAN. I would like to answer that question in a closed form, sir.

Senator BUNNING. OK. I have to go to the base closures. Someone mentioned the fact that there was \$4 billion plus saved. Where did the money go? General Ryan, it is your statement.

General RYAN. We have continued to put most of our emphasis into people and into readiness accounts. That is where I would say most of our investment from any savings we have had through the years, particularly over the past 4 years, that is where we put our money and our emphasis, at the expense of our infrastructure and modernization of our force.

Senator BUNNING. Secretary Roche, you are also a base closure advocate. Where would you say the savings have gone over the last two base closures?

Secretary ROCHE. Senator, clearly at this stage of base closing you put up a lot in the front in order to save over a very long period of time, so you have investment in the beginning and then you have recurring savings over the long term, which are cost avoidance. I believe that if those bases had not been closed then the kinds of monies that we would have left over for maintenance, for modernization, for our people, would be under significantly greater stress.

Senator BUNNING. All the civilian personnel that are for base closures, would you bring before me or this committee the savings that have gone on from the two prior BRAC's that we have had? Because I am having a terrible time finding any of the money that we saved by the first two BRAC's.

Secretary ROCHE. Their costs avoided, sir? We would be glad to.

Senator BUNNING. No, no. I want to see the actual dollars that now you are spending for something else. In other words, if there is \$4.5 billion saved in the first two BRAC's, and you said that in a passing way and I do not know if you were really meaning exactly \$4.5 billion, I would like to see it so that I can be informed.

I do not think there is one person here, sitting up here at the table, that actually knows anything about the exact dollars being saved by the first two BRAC closings.

[The information referred to follows:]

NAVY RESPONSE

As of the end of fiscal year 2001, the Department of the Navy will achieve a projected net savings of \$5.8 billion as a result of two rounds of Base Realignment and Closure. Beginning in fiscal year 2002, we will save an additional \$2.6 billion each year. These net savings estimates have been validated by several independent sources.

ARMY RESPONSE

BASE REALIGNMENT AND CLOSURE (BRAC) SAVINGS

The Army will realize \$945 million in annual savings with the closure and disposal of all BRAC properties. Savings represent reductions in personnel and infrastructure operating costs. The Army realizes the majority of these savings when the closure and realignment actions are complete. The remainder of the savings occurs when the properties are disposed. BRAC actions resulted in \$945 million in savings in the Army's operating accounts in fiscal year 2001, while the Army is spending \$288 million in this final year of BRAC implementation. The Army has \$1.1 billion in remaining environmental liabilities after fiscal year 2001, which will be paid from a little more than 1 year of savings.

The savings resulting from closing and realigning installations are real. The BRAC savings have been recognized by the Congressional Budget Office and audited by the General Accounting Office and the Army Audit Agency. After closing 112 installations and realigning 27 others, the Army has reduced base operations and sustainment, restoration, and modernization costs and eliminated 16,462 civilian positions. The \$945 million in savings each year are now spent on readiness, modernization, and remaining infrastructure. Spending these cost avoidance dollars for priority programs rather than unneeded infrastructure presents an opportunity for the Army to operate more efficiently within the available top line obligation authority.

Secretary ROCHE. Sir, we will be glad to. In the Air Force it is cost avoidance principally. Since money is fungible, it is hard to find where a specific dollar went. But it is costs we do not have to pay in the long run.

Senator BUNNING. We cannot make up in 2 years or 3 years what took place in the last 9 years.

Secretary ROCHE. That is absolutely correct, Senator.

Senator BUNNING. So we have to do it on a gradual basis. You will get my cooperation to do it on a gradual basis. I am not going to blow the budget out of the water just to take care of future needs 20 years down the pike. But I will support increases and gradual increases in the DOD authorization and the budget to make sure that we are ready to fight a war if we have to.

Secretary ROCHE. Thank you, sir.

Senator BUNNING. Thank you.

Chairman LEVIN. Senator Akaka.

STATEMENT OF SENATOR DANIEL K. AKAKA

Senator AKAKA. Thank you very much, Mr. Chairman.

I would like to welcome all the witnesses here before us this morning and tell you that I am particularly interested in the readiness of our troops. A multitude of issues impact readiness, from adequate funding to addressing concerns about encroachment as it pertains to training ranges and facilities. I am looking forward to working with my colleagues and with you on these.

Secretary England, I want to tell you that I agree with your four strategic areas—that is, combat capability, people, technology, and business practices—and wanted to particularly ask you about this question that we discussed already. But to bring me up to date, what is the current status of the situation involving the Navy's decision to stop training at Vieques, and are alternative training sites available?

Secretary ENGLAND. Senator, there is a request coming in to Congress to change the law that requires a referendum in November. So we are asking, because we feel that is bad public policy, not to have that election in November. In the meantime, we have funded the Center for Naval Analysis to stand up the group to look at alternative sites.

In addition, it is not just a site issue, which is why I answered no to Senator Inhofe, because the real issue is one of adequate training for our sailors and marines. So they will look at the total issue of what is the training that we are trying to accomplish, what is the best way to accomplish that training, and then what are the facilities required to support that.

I was pleased, by the way, with General Jones' answer to that question because he said training does not take a back seat, and I agree with that. The question is, what is the best way to do it? So that is what this group will be doing, and that group is now being stood up and people named to that panel. So that is where we are at present, sir.

Senator AKAKA. Admiral Clark, your prepared statement refers to the difficulty of sustaining current readiness while investing in key future capabilities. In your testimony, you refer to the \$6.5 billion that has been reprogrammed from Navy programs to the current readiness portion of the Navy baseline in the program for fiscal year 2002 to 2007. This action has been characterized as putting the Navy on course to correct the underinvestment in readiness.

My question to you is, do you have any additional thoughts regarding this issue that this committee should consider?

Admiral CLARK. When I came here, Senator, last year for my confirmation hearing, we talked about the issue of readiness and it was my number one priority. I said as the CNO that that is where I was going to put my priority, that failing to do it was taking it out on the backs of our sailors and I was not going to do that.

I do not have final decision authority on this. I make recommendations. I am extraordinarily pleased with the steps that we are taking in this budget. It is the right thing to do. When we fail to do it, what we end up doing is that we have to reprogram or take action in an execution year to fix a bill that we have to pay, current readiness, in order to deploy the forces. That has an extraordinarily corrosive impact on all of the people that are affected in this process.

Here is what I have learned since I came here for my confirmation hearing in all sorts of analysis. This is happening because of the age of the force. We have proven to ourselves that the demand for spares on our aircraft, for example, not the dollar amount, the demand for spare parts, is going up 9 percent a year, spares alone. This is costing us between 13 and 15 percent a year. The costs are spiraling out of control.

So when we got down to the amended budget, we were really happy that we were able to put additional F-18's back in the budget. The only way out of this is to buy our way out in terms of getting rid of these airplanes that are costing us a fortune to operate. So that is what I have learned in the past year. I now have data to back up what I was experiencing in the fleet when I came into this job.

I am convinced that the challenge here is the balance. We cannot short the current readiness accounts or our people to pay for it. At the same time, we have to figure out how—and this is why I am so much in support of Secretary England's initiative about real reform. We have to know exactly where every dollar is going and we have to not only pay the current readiness bills, because that is why the Nation has a Navy, to be out there, but also to do something significant to turn around this problem.

Senator AKAKA. Thank you.

General Jones, I took note of your concern regarding the aging infrastructure that is being indicated here and the backlog in maintenance and repair. I share your concern, especially as it pertains to family housing and encroachment. It is important to continue discussions with the community regarding encroachment and to do what is necessary to be environmental stewards.

I am particularly interested in your assessment that the PERSTEMPO program enacted in last year's defense authorization act does not comport with the mission and culture of the Marine Corps. Could you further elaborate on this assessment and provide comment as to what alternatives the Marine Corps is examining to address this issue?

General JONES. Thank you, sir. We are fully tracking our PERSTEMPO per DOD guidance and will report to Congress as required. To our way of thinking, the high PERSTEMPO per diem equates to paying premiums for doing what we do as normal operations in deployments in support of our national mission. As I have said before in previous testimony, 68 percent of the Marine Corps is always on its first enlistment. That means we have a young force, average age is 24 years or younger.

We are able to recruit people, young men and women of great courage and character, to do these types of missions, and they come into our ranks to do those kinds of things, and we do not dis-appoint them. It is a matter of fact and record that the highest re-enlistment rates in the Marine Corps are in our deployable or deployed units.

So satisfying the expectation of this very young force with the idea that they are going to do something important for the Nation in pursuit of our national objectives and in support of really a historically proven record over the last 50 or 60 years that being for-

ward engaged is good for the Nation across a whole broad spectrum of interest items.

We feel that it is a question of capable and good management and leadership of the force. To have a policy that compels us to pay money to do what we naturally want to do does not seem to be, at least at first glance, something that we—it should be something that we look at.

For example, it is not just limited to operations. People who go on temporary additional duty from headquarters, people that train on our bases, have a clock that starts counting with every day they spend away from their domicile, be it a BEQ or bachelor quarters or married quarters.

We will know more later on this summer about the fiscal impact of this. But I think we need to come back to Congress, and I propose to do that, with some greater facts and figures to show exactly what the impact of that legislation will be. My personal judgment is it will be significant.

Senator AKAKA. Thank you for your responses.

My time has expired, Mr. Chairman. I will submit additional questions that I have for the record.

Chairman LEVIN. Thank you, Senator Akaka.

Senator Roberts.

STATEMENT OF SENATOR PAT ROBERTS

Senator ROBERTS. Thank you, Mr. Chairman.

General Ryan, thank you for your courtesies and a job well done. As the Air Force has moved from a stationary military fighting force to an expeditionary force, you have piloted, if I can use that term, the Air Force in outstanding fashion. We owe you a great debt of thanks. You do an outstanding job, and we like you as well. I like Mike.

General RYAN. Thanks.

Senator ROBERTS. I want to thank you all for your candor. We have asked for candor in the past. The Senator from Kentucky sort of alluded to that in a different kind of question. As a result, we have all experienced a time frame where we have understood our military has been stressed, drained, and in some cases hollow. But most of all, we appreciate your coming with your candor.

As a result, we have passed significant pay raises. We fixed the retirement system. We have done a lot with health care. We are doing a lot with emergency supplemental funds. So thank you all for the job that you are doing.

General Jones, my heart goes out, as a member of the Marine Corps family, to the families of the three marines that lost their lives in protecting our Nation's 911 force in readiness. I appreciate your comments and the comments of our distinguished chairman.

Now it is time to move to the B-1. Secretary Roche, you remember the old days when Bob Dornan was known as "B-1 Bob"?

Secretary ROCHE. Yes, I have met the gentleman.

Senator ROBERTS. Well, now you have B-1 Max, B-1 Larry, B-1 Mike, B-1 Zell, B-1 Sam, and B-1 Pat. It is my hope in discussing this with the distinguished chairman and the ranking member and the subcommittee members that we are going to have a hearing on this in the immediate future in the Strategic Subcommittee

with the Emerging Threats and Capabilities and the Airland Subcommittees invited to take part. So we will welcome you at that particular time.

The Senators from Kansas and Georgia and Idaho, however, are being painted, and I am upset about this, as only interested in the B-1, and I have a statement I am going to read here, "because of the loss of the platforms and the jobs in their respective states." That is not it.

I am interested in ensuring that the men and women of the United States military, active, Guard, and Reserve, that serve in the State of Kansas or Georgia or any other place are not jerked and assets are moved only when it makes sense and when it is part of an overall plan.

For the past 3 years, the Emerging Threats and Capabilities Subcommittee, a new subcommittee by the grace of our ranking member and our former chairman—and I chaired that subcommittee until recently—has looked closely at military transformation and the very real need to align our forces to the threats we are most likely to face. I am a strong believer in transformation.

Secretary Roche, thank you for coming this morning to visit with me about this. I am all in favor of your efficiency initiatives. I know you will do a great job. You have started something called the Business Initiative Council or Committee. It is called "BIC". That is the new acronym. I am all for that. I want to thank you for coming up.

But I also feel strongly that any effort to make any significant changes to our force structure and our weapons systems must be well thought out and part of an overall plan. Part of my frustration—and I shared it with you—is that this B-1B move was done quickly, quietly, with zero consultation, more stealth by the way, than any B-1 or B-2 has, and not part of any defense-wide strategy. I know you do not agree with that, but that is my take.

I do not think we should let arbitrary actions made in isolation from the rest of DOD impact on the transformation I believe to be vital to our future defense strategy. Now, I see placards frequently touting the Air Force Active and Guard as one team. Senator Carnahan just asked General Ryan about that. This action to pull the B-1B away from the Guard and place them only in Active Duty military bases speaks louder than any placard.

If I were a member of the Kansas Guard—and I just was out on the flight line yesterday when Lieutenant General Whirly took time to come out and explain the administration's position—of the Georgia Air National Guard who spent years of blood, sweat and tears maintaining the high state of readiness of their B-1B units, only to see them transferred—I originally had "jerked away"; I have now changed that to "transferred"—to active forces, I would question the commitment of the active Air Force to the Guard.

They are not doing that, by the way. They are standing tall and they are standing at parade rest and saying: We will do the mission.

Finally, from my understanding the mission capable rate of the B-1B is low because of the lack of funding for support for the aircraft. As the congressionally-mandated study showed, given the proper funding and support, the mission capable rate of the B-1B

is very good. If the same lack of funding and support was provided to any of the Air Force's other bombers, what would happen to the mission capable rate of that platform?

I have about six questions here that I am going to submit for the record. I am going to skip over those. Some of them are a little argumentative. Some are meant to produce some meaningful dialogue, which I am sure that we will have. I want to cut to the chase.

Congressman T. Hart and Senator Brownback and I yesterday in Wichita at McConnell Air Force Base, home of the proud 184th Bomber Wing, said the first thing we need to do is to delay this. We cannot do this in 10 weeks. You cannot jerk people around that way.

You agreed with that as of this morning and said that you are going to go back to the Secretary of Defense and indicate we are not going to do it until 2002. That means not 10 weeks. At least there would be 16 months. In the 16 months—and I want to clarify that—it would at least give us an opportunity to compare this with the QDR, with another GAO study requested by Senator Cleland, let us scrub the numbers that are in dispute, let us try to not start a sheep and cattle war between the National Guard and the active duty folks, and that we would have sort of a time out and we could arm-wrestle over the future of our long-term strike capability, whether it is B-2 or B-1 or B-52 or the future bomber that we talked about.

But I do not think that is going to be the case. I got a report of your statement that in 2 months time as of 1 October, to use a Dodge City term, we are going to head them up and move them out. I do not want to head them up and move them out. I want at least a little time to present our case to you, sir.

So I want a clarification. Do we have 16 months or do we have 2 months and we take the gloves off?

Secretary ROCHE. Senator, thank you. First of all, the Secretary of Defense has apologized for how this was unveiled. On the part of the Department of the Air Force, I apologize as well. We never intended for it to come out the way it did. We thought we would have time to consult and we failed to make our case strongly enough at that time. So that is our responsibility.

Second, Senator, we do not want to do anything draconian to people and, therefore, it would be our intent to ask the Secretary's permission to be able to use all of 2002 to do this in a sensible manner.

Third, this is not something against the Guard. This is something for the B-1 force. The B-1 force was designed in an era of nuclear weapons. It was designed at a time when you spread bombers around the country because you were afraid of SLBM's being fired from our shores, attacking the bomber leg of the triad.

It is time now to try to be more efficient and to make this force a usable force. It is \$2 billion behind as it stands in maintenance and modifications. I view this as a force that has low capability rates, very, very high cannibalization rates, because it is just not as relevant as it should be, and I wish to make it relevant.

I do not see the kind of money necessary to be able to make the whole fleet relevant and meet our other needs, our purchases of C-

17's, F-22's, etcetera. Therefore, we proposed a way to save part of the force and to make it very relevant for the next 30 years. That was what was going on.

With regard to the Guard members, we would like to engage with the Guard in Kansas and Georgia to look for alternative missions for them, such things as associate squadrons. We would like to have a dialogue on the MILCON on those two bases that was associated with the B-1 to see how much of it would be useful for the base in large, because we see those bases going on.

We hope we will be permitted to do the kind of thinking and discussions with you in the intervening period and not be restrained from doing that so that we can work with you, make our case, and, as I promised you this morning, when I have looked at the numbers and have asked for them recently, the comparisons between mission capability rates and flying hours are very, very close. We understand that the Guard in Georgia has a different analysis and we respect those folks. They are part of one Air Force. We will go over their numbers and I have promised you that we will set up a session with your folks, with the Guard, our people, and I am sure we are going to come back to the fact that we do not have an auditable set of books and that how you allocate overhead is going to be the clear issue.

But we have nothing to hide. We would be glad to share this. But the intent was to take the investment made in B-1s and to make it a useful investment and not one that is not. We do not see our ability to come back and just ask you for more and more money on top of what our other needs are, sir.

Senator ROBERTS. Mr. Chairman, my time has expired. Could I have 1 additional minute? I apologize for asking this.

Chairman LEVIN. Sure.

Senator ROBERTS. Well, I do not apologize. I am just going to ask for a minute.

Chairman LEVIN. In that case you cannot have it. [Laughter.]

Senator ROBERTS. Welcome to the minority. [Laughter.]

I appreciate all that. We went over that as of this morning. Again, I want to thank you for taking your time out.

We want the B-1 to be relevant. How on earth could anybody say that it should not be relevant as part of the B-52, B-1, B-2? As we go through this, I am looking for the future strategic bomber that everybody knows we are going to have to have. I do not even see it on the table yet, but we need to talk about that.

I am for consolidation if it works. But basically what you have done is you have said we are not going to—we are going to give it to the two active duty bases because that is the only mission they have, and you did not want to go down the road, despite everybody saying yes on a BRAC, you did not want to take that step that might lead to a BRAC. I am being very candid about it.

But the two military installations that are run by the Air National Guard do it better. Now, I know we are going to have some argument about the numbers. I just have some more numbers here in regard to the allegations that you have made. We need to compare apples to apples, and I think we will do that.

But basically now you have told me that over the period of time we will have an opportunity to make our case, and I really appre-

ciate that and we can do so in hearings and hopefully the hearings will take place in a couple of weeks. On behalf of the warfighters in Georgia and Kansas, we are not going to simply jerk them away as of the 1st of October; is that correct?

Secretary ROCHE. That is correct, sir.

Senator ROBERTS. Thank you.

I thank the chairman.

Chairman LEVIN. Thank you.

Secretary England, relative to Vieques, is the Defense Department going to be submitting a legislative proposal to Congress to change the current law that requires a referendum on the continuation of live fire training on the Vieques training range?

Secretary ENGLAND. Yes sir, they are.

Chairman LEVIN. When will that be submitted?

Secretary ENGLAND. Sir, I hope it is any day now. I thought it would have happened by this time.

Chairman LEVIN. Is that going to recommend that the referendum be cancelled?

Secretary ENGLAND. Yes, sir, it will recommend—it would say to delete that part of the legislation that now says have a referendum. It will delete that language.

Chairman LEVIN. What progress are you making to identify alternative training sites?

Secretary ENGLAND. We are standing up the outside group and naming those people right now, Senator.

Chairman LEVIN. But your cancellation recommendation—and I emphasize it is only that—is not contingent upon your finding another site?

Secretary ENGLAND. No, sir. Our feeling is that we will be able to find another site, other techniques. Again, this is not site-specific. It is how do we achieve the level of training that we require. So that could be a combination of sites, technology. So it is not to look for a one for one replacement for Vieques.

Chairman LEVIN. Have you identified that alternative approach?

Secretary ENGLAND. No, sir, we have not. We are working at that. We do have preliminary findings from CNA that indicates a combination of other sites that would be appropriate, sir. So there have been previous studies that indicate there are alternatives.

Chairman LEVIN. But until that alternative approach is identified, you are not making your recommendation that the referendum be cancelled contingent upon the identification of an alternative approach?

Secretary ENGLAND. No, sir. The recommendation is made really because in our view, at least my view and I think some other people's view, it is just poor public policy to have people voting on actions important to our sailors and marines. We would much rather make those decisions in the Department of the Navy and the DOD and with consultation with Congress than have people vote on those decisions, sir.

Chairman LEVIN. Is your proposal going to say that you will end training in May of 2003?

Secretary ENGLAND. Yes sir, it will.

Chairman LEVIN. Admiral Clark, let me ask you about Vieques. Were you consulted on the decision to ask Congress to cancel the referendum before that recommendation was made?

Admiral CLARK. I think, Senator, there were discussions for several months and before Secretary England arrived with regard to this issue. With regard to the specifics of going to Congress with this, I would say that the discussion was more about the desirability of having a referendum. I would tell you that I represented my case in those discussions that I thought the referendum itself—and I am a military guy, not the policy guy—but that I thought that it was bad public policy.

Chairman LEVIN. That was before the recommendation was made to have a referendum?

Admiral CLARK. That is correct.

Chairman LEVIN. But I am talking about——

Admiral CLARK. No, sir.

Chairman LEVIN. Oh, you did not make that before the recommendation to have the referendum last year?

Admiral CLARK. No sir, that is not what I am talking about.

Chairman LEVIN. So it was the current——

Admiral CLARK. I am talking about currently in this calendar year, after the new administration arrived.

Chairman LEVIN. But before there was actually a decision made, apparently, to come to Congress to recommend cancellation of that referendum, were you consulted at that time? This year were you consulted before, that Congress was going to be asked to cancel the referendum?

Admiral CLARK. I was not told that—I characterize it the same way. We had discussions about potential courses of actions. I was not told before the decision was announced that this was going to happen.

Chairman LEVIN. Were you surprised by it?

Admiral CLARK. I was not surprised that this was the conclusion of the administration.

Chairman LEVIN. What were you surprised by?

Admiral CLARK. Was I surprised by which piece of it?

Chairman LEVIN. By the fact that you were not notified that the request was going to be coming to Congress?

Admiral CLARK. I had discussions with both Deputy Secretary Wolfowitz and Secretary England. On this particular, when Secretary England made the decision, he did not come and we did not talk about it until after he made the decision and then he informed us.

Chairman LEVIN. General Jones, were you consulted?

General JONES. My answer echoes the CNOs because I was at the same meetings.

Chairman LEVIN. To the service secretaries here, Secretary Rumsfeld has assigned all three of you, I guess, to sit on a new board of directors to manage the business affairs of the Department of Defense. The Secretary has testified that the Department should be able to save \$15 billion a year through improved business practices. In the past, the Department has tried to save money by contracting out commercial functions to the private sector, but the Department has never provided the management at-

tention needed to ensure that savings are actually realized when it contracts for the services from the private sector.

A series of reviews by the Inspector General and the General Accounting Office have revealed that the Department has failed to compete requirements for the delivery of services and has barely begun to implement requirements for performance-based services contracting.

At a more fundamental level, the Department of Defense has no centralized management structure for service contracts, has never conducted a comprehensive spending analysis of its service contracts, has made little effort to leverage its buying power, improve the performance of its service contractors, rationalize its suppliers base, or otherwise ensure that its service contract dollars are well spent.

Do you believe that the Department should be able to achieve significant savings by instituting better commercial practices for the management of the \$50 billion service contract budget? Secretary White?

Secretary WHITE. Yes, I do. It is done all the time in the business world. Outsourcing of non-core functions is a way of life. You do not stay in business if you spend a lot of time on non-core activities, and I see no reason why we should not be able to do the same thing in the Department. That is our intent.

Chairman LEVIN. Secretary England.

Secretary ENGLAND. I would agree. I think Secretary White summed it up very well, sir.

Chairman LEVIN. Secretary Roche.

Secretary ROCHE. In general I agree. We have some examples in the case of having total maintenance on the 117, where we have absolutely measurable dollars that we can point to. But with regard to the BIC, it is not just contracting out. There are a lot of things we are probably doing that create our own inefficiencies, where we are laundering our own laundry back and forth, we would like to eliminate. We would like to find areas where we are asking each other for work that simply does not have to be done or duplicating sets of meetings—a series of things to get smarter, better, faster, and to get the decisionmaking down at lower levels and empower people to do this in a better way.

Chairman LEVIN. Senator Warner.

Senator WARNER. Thank you, Mr. Chairman.

A little bit of good news every now and then, not that we have not had good news here today. But Senator Levin and I have been in this Senate for 23 years and we have gone through many military operations by our Nation and each of us in our own respective lives have been involved with the military in other ways long before we came to the Senate.

But this is the booklet that is being given to a private first class, who happens to be my executive secretary's son, as he embarks on a mission to the Bosnia-Kosovo region. I have never seen a better prepared document. It is carefully written so that a, in his case, private first class can read it and learn the history of the region going way back to the 1300s and exactly what each soldier is expected to do in the performance of his or her duties in the platoon,

in the company, in the regiment, and the other nations that are involved.

I just wish to commend those, presumably in the Department of the Army and indeed maybe throughout the Defense Department, who are preparing our men and women in both the active and the Guard as they embark into that region of the world to better understand why they are going and to some extent, depending on their assignments, putting their safety at risk in the cause of freedom.

So this is very, very well done, and I commend the Department of Defense and the military departments for their preparation of their people as they deploy.

To the Air Force Department, Mr. Secretary and Chief. I do not like to use the personal pronoun "I", but I will go ahead and do it anyway. Last year I included \$200 million in the defense authorization bill to accelerate the development of unmanned combat aircraft. I have been joined by a number on this committee. We are moving in that direction.

General RYAN, I do not want as a heritage, you being a proud aviator of many years, to be too strong an advocate today of moving toward unmanned cockpits, but I believe that is the direction that this country has to go in. You have some of the leading programs in this area, and I wonder if you might lead off with your own enthusiastic support of this concept.

It is not going to totally, in any way I think, threaten or abridge or otherwise limit the number of manned cockpits in the future, but a certain percentage of our warfighting equipment in my judgment should be unmanned or remotely controlled, so to speak, or both. Your own views about those programs and what you see as the future for them?

General RYAN. Yes sir. First of all, I do not think pilots across our Air Force in leadership positions have any hatred for unmanned aerial vehicles. In fact, if you look at our inventories, we have gone that way in almost every munition we have. Almost every one of our munitions is a standoff munition. It in itself is an unmanned aerial vehicle, whether it is an AMRAAM or an air-to-air missile or an air-to-surface missile, things that give us standoff, where we do not have to put people in harm's way. It is just most of those do not come back; they go one way.

We are now working very hard on technologies that would allow us to do it, to use these vehicles, where they are reusable. Predator is a very good example. We used Predator first in combat in Bosnia and it went to places that I as the commander over there did not want to send—

Senator WARNER. I remember seeing those operations. I went on the actual sites and watched them go and return.

General RYAN. Yes, sir.

Global Hawk is another capability. We are building a UCAV now to look at the applications of unmanned aerial vehicles in a direct combat mode, where we would have the vehicle dispense munitions or high energy capabilities that would disenable military capabilities of the other side. So we are very much into this and I see nothing but increased involvement in these kinds of activities.

Senator WARNER. I thank you.

Secretary Roche.

Secretary ROCHE. Senator, the Secretary of Defense is very much supporting our increasing the amount of money we are going to put into unmanned vehicles. They are not substitutes for piloted vehicles; they are complements. We will run into in time—it is a bandwidth problem, the communications problem raised earlier by one of your colleagues, because when you put sensors in you want to remote everything back and you are using a lot of bandwidth.

So we know we are stressing this, but the state of digital technology is such that we feel these vehicles have a high reliability and can be very useful and can complement us very well.

Senator WARNER. But I think that they have a mission in land warfare, General Jones. Do you agree with me?

General JONES. Absolutely, yes, sir.

Senator WARNER. You are moving along. You have some excellent research and development going on in the Marine Corps. We want to compliment you particularly; you are on the cutting edge of all the military services as it comes down to the weapons of mass destruction, particularly biological and chemical. You are spearheading that research and development within the Corps.

But back to the unmanned, you support that?

General JONES. Absolutely. Our warfighting lab at Quantico is doing extraordinarily good work in support of the requirements of our ground warfighters. As I said, the future lieutenants and captains are going to have an incredible array of information that is going to come in. They will be able to look over the next hill with great precision. This is exciting stuff.

Senator WARNER. Admiral.

Admiral CLARK. Absolutely, Senator. In fact, I predict that some day they will be flying from aircraft carriers.

Senator WARNER. I hope I am around.

General Shinseki.

General SHINSEKI. Likewise, Senator. We have dedicated a good bit of our look in science and technology toward the robotics arena as well. Even with a system like Crusader, we have the crew separated from the weapons system's ability to deliver fires. I mean, whether it is 3 feet, 30 meters, or 3 miles, control over a weapons system that delivers like the Crusader does is a matter of distance, and we are working on those technologies.

Senator WARNER. I make an observation for the Department of the Navy—I thank you, General—that in my judgment, Mr. Secretary, we have had a very good discussion on BRAC today, but our information for the committee indicates that the Department of the Navy has not sufficiently funded—as a matter of fact, we look at \$90 million in deficit financing—BRAC funding for installations that have been the subject of closure in past legislation of BRAC and awaiting transfer to the communities.

Now, that hiatus period is very difficult for those communities to deal with the loss of the military, frankly payroll, and the awaiting of a follow-on substitute in the private sector. Would you examine that?

Secretary ENGLAND. Yes, I will, sir. I understand it is the case. I do not have those specifics, but I will take that for the record and get back with you, sir.

[The information referred to follows:]

The Base Realignment and Closure account has been buffeted by budget reductions from the Navy, through the Office of the Secretary of Defense and Congress in the last few years, primarily due to the expectations that prior year unexpended balances could be used to fund current requirements. Because of competing budget needs, the Navy was unable to fully fund the fiscal year 2002 budget requirement. There are significant shortfalls in our ability to accomplish the work agreed to in state and federal cleanup agreements and, at our current funding levels, turnover of some bases will be delayed by 8 to 10 years. In addition, the Navy will miss the opportunity of good business decisions to transfer significant parcels of land to local communities through Early Transfer Authority.

Senator WARNER. Our chairman asked I think very penetrating questions about the Vieques situation and indeed he and I collaborated on deciding when we would address that issue. I think we jointly decided we would wait until this hearing today rather than take the initiative as did the House of Representatives in a special hearing.

You are advocating coming up with language canceling the referendum. That was the position taken by the previous administration, endorsed by Congress, enacted into law with Congress and the President's signature.

Chairman LEVIN. Not the cancellation.

Senator WARNER. No, no, but the referendum was a part of a thought-out process of Congress and the executive branch.

My question to you is very simple: What do we get in return if we cancel that referendum? It is something that is being demanded by the present governor of Puerto Rico, but it was agreed to by her immediate predecessor. The United States is caught in the switches politically between one governor, who worked with our President and Congress to get a framework solution, and the next governor comes right along and absolutely abdicates any responsibility with regard to the law of the land.

So what do we get in return?

Secretary ENGLAND. Sir, I think what we get in return—first of all, there are no “good alternatives” here. This is a contentious issue. The situation that we have today is the one we have to deal with.

What we get in return is we do not allow other people to vote on the policies affecting our naval services. In my judgment and I think in the judgment of other people, it is very bad policy to have someone vote on issues that affect our sailors and marines. I think that is a very bad message to send around the world and around the country.

Senator WARNER. I think you have made that point clear. But let me ask you the following: Have we any assurance from this governor for the balance of the life, which goes to 2003—and that remains part of the legislation, does it not?

Secretary ENGLAND. Yes, it does.

Senator WARNER.—that she will work to help enforce such security as is needed to enable us to carry forward the use of that range during that period of time? Because, frankly, before this Senator accedes to a change in the legislation I want to know what we are getting in return. Is this governor going to work with us to have the security so that the range can be utilized to balance, or are we going to stop that?

Secretary ENGLAND. It is my understanding, Senator, that the governor will indeed uphold the law. The last time we were in Vieques we did have much better security at the site, much better than we had previous times. That occurred after the announcement we were going to leave, so I viewed that as a positive sign. I was hopeful that would occur. It did occur. While we had some disruptions the last time, it was significantly less than we had the prior time.

My expectation is that we will probably continue to have some disruption, but hopefully at a lower level. It is important that we stay, however, until May of 2003.

Senator WARNER. I agree with that.

Secretary ENGLAND. Because we do need the time to develop an alternative. As you recall, my rationale was the worst possible situation was to have to leave early for whatever circumstances.

Senator WARNER. I have to move on. We are in agreement on that, but I am going to press to figure out what we get in return if we are canceling this referendum, because I am not ready to concede that we would have lost that referendum. We put \$40 million out there to work with the people of that small area of Vieques and I am not so sure that we could not prevail. But it looks as if that option may well be removed in the future by Congress.

But I want to finish up with the following question. This committee will—and I will be working with our chairman and may well during the course of this year be revisiting Goldwater-Nichols. For those that are watching this hearing, that was framework legislation adopted by our committee many years ago that kept in balance what I view as the responsibilities of the uniformed military and the responsibility of the civilian secretaries of the services and of defense in the management of the Department.

Now, clearly from the earliest times in our Republic it has been civilian control over the military and it should always be that way. But we want to assure that the uniformed services have the opportunity to make known their views, to have those views carefully considered as you evolve through the decisions that are being made.

Quite frankly, I am going to ask you, in the context of the current QDR—and a lot of communications come to this committee from the Department. I have the highest respect for Don Rumsfeld. He and I have had parallel careers for many, many years. We go way back. I think that he has put together, along with the President, one of the finest teams I have ever seen of civilian managers, and three of the great ones are here before this committee today.

But at the same time, in this QDR process, I am going to ask each chief, do you feel that your views are, first, given an adequate opportunity to be expressed and, second, are being taken into consideration, because this QDR process will be a foundation block for the 2003 budget which could represent a significant change of direction in the management and the future of our Armed Forces?

General Ryan.

General RYAN. Yes, sir, I believe that our inputs were taken and we had the opportunity in developing the terms of reference for the QDR and our participation is substantial in the review process we are going through now.

Senator WARNER. General Jones.

General JONES. I concur with General Ryan. I do think that it would be a worthwhile discussion to have to examine the Goldwater-Nichols from the standpoint of other unintended consequences as a result of the legislation. But in the context of the QDR, I have absolutely been consulted and participated fully.

Senator WARNER. Admiral Clark.

Admiral CLARK. Senator, we have been consulted, I have been consulted, we collectively, extensively. We are spending hours and hours on the QDR process. The end product will determine the extent to which we have affected the process.

I would like to align myself with the comments of General Jones regarding Goldwater-Nichols and follow-on discussions that you might have. I am convinced there are areas that need to be pursued.

Senator WARNER. General Shinseki.

General SHINSEKI. Likewise, I think it would be a good opportunity to relook Goldwater-Nichols. With regard to the QDR strategy, for the last 6 to 7 weeks I think all the members at this table have been involved, really sometimes several times a day, in discussions about that strategy. The output of that was the terms of reference for the QDR, which is currently under way, and our ability to bring, at least in the case of the Army, about the important contributions of land power, discussions about the relevance of warfighting and what principles apply, and discussions about risk and how we see risk and think about it, not as an academic exercise, but for us operationally it is about mission success and the ability to execute those missions without exorbitant cost.

Senator WARNER. I thank the witnesses.

I thank you, Mr. Chairman.

Chairman LEVIN. Thank you.

Senator Nelson.

STATEMENT OF SENATOR E. BENJAMIN NELSON

Senator BEN NELSON. Thank you, Mr. Chairman.

I want to thank all of you for being here today and for the opportunity to receive your reports and respond to them. In my limited time with the Armed Services Committee thus far, I have come to believe that the United States military has legitimate and pressing needs that include, among other things, better pay, housing, health care, and training areas. I have also come to believe that the Pentagon's accounting system does not work very well. Some might suggest it is broken. As Senator Byrd has indicated on more than one occasion, a simple audit cannot be done to explain where the money is being spent.

What I would like to know is, if we are spending more money, that it is going towards the things that we need most, our highest priorities. So I look forward to the findings of Secretary Rumsfeld's strategic review and learning what broad missions the Secretary believes the military should prepare for if it is not going to be a two-war concept, a two-war strategy.

I am also anxious to learn what steps are being taken in the development of a missile defense system which could cost a considerable amount of money by anybody's terms, money that can be spent

certainly on domestic and international terrorism as well as fully funding already existing defense programs.

So my question for the chiefs today is, as we are looking at phasing out a two-war requirement as a strategy, what do we do to replace that with? If the two-war strategy is no longer needed, no longer fundable, what do we replace that with? What will the strategy be for the branches in the years ahead?

General RYAN, we will start with you and perhaps we could go down to the other chiefs.

General RYAN. Yes, sir. Part of our Quadrennial Defense Review is addressing that very question. It is not so much a two-war strategy as it is a force structuring mechanism to determine the depth of forces you need across all of the services. So we are struggling with that issue right now.

What we did in the previous QDR was to take the two major regional contingencies or two major theater wars and use that as a force sizing mechanism for the amount of capability that you need, the depth, and then assumed that all of the other activities that we do are lesser included cases of those two.

This particular strategic review and QDR, we are not using that as the construct. We are using a different look at being able to continue to do in critical areas of the world, our ability to halt aggression and also fight major regional contingencies at the same time, a major regional contingency, at the same time doing humanitarian operations, etcetera. So it is a completely different look at how we force structure.

We are not through with that work yet, but that is the direction in which it is headed.

Senator BEN NELSON. But if the two-war strategy or two-theater strategy is the base now from which all other force structure questions might arise and that is being phased out, then is there something that takes its place? Or is it just that it might be some strategy for protection, some for defense, some for offense? Do we have anything that comes back, or is that what we will find out when we get the review?

General RYAN. Well, we have set in general the terms of the force construct. That is, to be able to protect the capability to win in a major theater, one major theater war, while in other vital areas being able to repel attacks, while at the same time doing a series of smaller or lesser scale contingencies.

That replaces the two. Then what you do is you go through the exercise, which we are in the middle of now, of putting forces against doing that all at the same time, and that becomes the substitute for the two major regional contingencies. It is not a strategy. It is a force sizing mechanism.

Senator BEN NELSON. General Jones.

General JONES. Senator, this is an extraordinarily complex issue and it is one that is uniquely faced by our Nation because we have global responsibilities that, frankly, no one else does at this point. Warfighting is obviously the most pressing requirement to be able to make sure that you have sufficiency in your force structure and capabilities and the right systems and the right programs to guarantee that, as people have said, it will not be a fair fight, that we will win overwhelmingly and convincingly.

Coupled with all of this in the process is the ability to examine the sufficiency that is required to do all the other things that we do in executing our unique role as leaders: engaging with other militaries, providing the bases for peaceful economic cooperation in various parts of the world, teaching by the fabulous example of our armed people in uniform in our employed forces, land-based, sea-based, whatever, that subordination of the military to civilian authority is a good thing and how you do that.

We attract other militaries to sit around conference tables with us who want to try to be like us or want to have an association with us on a permanent and long-term basis. That takes a certain amount of robustness that is calculated into the force structure or force sizing mechanism where we have to respond to real threats or be able to.

Then there is the problem of trying to figure out what you do in the near term, which is obviously more pressing, versus the difficult-to-define far term. You can use the case of Desert Shield-Desert Storm as a force that was built and put together when the Soviet Union was dominant and we were building a force to react to the Soviet threat, and we wound up using it for something dramatically different.

So this is all rolled into the QDR. We are working our way through that to whether it is one major theater war or one plus several lesser contingencies or two. The force structure implications do not necessarily mean less forces. These are tough issues and you have to go beyond the warfighting to talk about what the force will look like on a day to day basis because of how we use it. You need sufficiency, you need rotational forces that routinely deploy, have to be refreshed. So it is a big issue.

Admiral CLARK. Senator, in the past, frankly, one of the problems with the two MTW strategy was that the force structure that fit that did not fit the world we were living in. We had these forces that we tagged as low density, high demand, and that is because we were engaged in a lot of areas where there was not a major theater war going on, but we had forces committed for peacekeeping, for any kind of activity. The fact is that once the force is committed the commander has to know what is going on, he has to collect intelligence, and these are the kind of resources that did not match.

For the Navy, I see this unfolding and what we have to do as a Nation is answer the question, what do you want us, the Navy, to do? The answer in QDR 1997 was clearly that in the post-Cold War era we had moved a significant portion of our force back to the continental United States instead of being based overseas and the whole posture was set up so that Presidents in the past asked the question, where are the carriers? Do you want the carrier battle group and this kind of capability to be there in a month or do you want it to be there in 72 hours? The answer was in 72 hours, and our force structure has been sized in order to give the President those kind of options.

So General Ryan has laid this out. Clearly, this posture will be able to deal with additional contingency, smaller scale things, and be postured and the force structure put together correctly to be able to do that, instead of believing that two MTW's gives you the ability to do any and all lesser included offenses.

I believe that the challenge for us then is to size how many of those we are talking about, and that work is going on, and what is reasonable and whatever the opportunity costs, and we are working toward that.

Senator BEN NELSON. Thank you.

General SHINSEKI. Senator, a key element of the current QDR that does not get enough attention is an assumption that says plan on strategic surprise. I think that is a key point here, that if you try to get it perfect you are probably going to be wrong, and if you are confident that your perfection in prediction is exactly right you could be wrong by a wide margin.

I think for all of us, as we have participated in this exercise, it is to accept that assumption and then to lay out the requirements for as much flexibility as we can provide in the formations we can afford, so that we can accommodate that kind of reality, a strategic surprise.

For an Army that is likely to go to war in the foreseeable portion of this century, we would like to go to war with the best and the biggest Air Force we can afford. We would like to go to war with the best and the biggest Navy we can afford. We certainly want to bring to this joint equation here of Navy, Marine Corps, and Air Force the best Army that we can afford. That is part of our deliberations.

Our contributions have been about warfighting and about why decisive warfighting is a key element of discussion and why risk and the way we treat risk operationally is important. I think we have been able to bring those contributions to the debate.

Our Army today is the best Army in the world, but we have to do something about it. I think all the chiefs have laid out programs to describe their particular perspectives, but we are the ninth largest army in the world. We do not have to be necessarily any bigger, but we better be the best on the day we have to go, because seven of the eight ahead of us are potential adversaries.

Senator BEN NELSON. Thank you.

Chairman LEVIN. Thank you.

Senator Inhofe.

Senator INHOFE. Thank you, Mr. Chairman.

First of all let me echo, everything good and glittering that was stated about General Ryan. I would like to have it all attributed to me, but I do not want to take the time right now to do it if that is all right, General Ryan.

General RYAN. Thank you, sir.

Senator INHOFE. I was very disturbed, Secretary England, by your answer to my last round of questioning. The statement that was attributed to Don Rumsfeld by General Jones, which was that we should only replace things when we have something better to replace them with, I asked if that should include training ranges. As I understand it you said that should apply to weapons, but not to ranges. Is that accurate?

Secretary ENGLAND. No, sir. I believe you said does that apply to Vieques and I said no, it did not.

Senator INHOFE. Does it apply to ranges?

Secretary ENGLAND. Pardon me, sir. I thought you said does it apply to Vieques, and I said no to that question because the issue

in my mind is not Vieques. The issue is one of adequate training and it is not necessary, at least in my mind, that we have Vieques. The issue and the question is what is the best way to train our men and women. So it is a broader question.

Senator INHOFE. I do want to use up all my time on your answer here. It was not an accurate interpretation of your response that this should not, does not apply to training ranges, just to weapons systems? That is not what you said?

Secretary ENGLAND. No, sir. Again, I do not want this to be just a Vieques issue. This needs to be an issue of training and not just specifically Vieques. So it definitely applies to training. Training is as important as our weapons systems. I certainly recognize that, and that is the whole objective in my approach, is to make sure we will have adequate training in the future. So that is the whole approach, is to make sure we have the same objective. We come at it from a different way, Senator.

Senator INHOFE. Well, I would suggest that we have five dead American soldiers today as a result of not being able to use the Vieques range for integrated training. It happened on March 12 in the Udari Range in Kuwait. Do you have any concern about that?

Secretary ENGLAND. Sir, for my understanding that is not the case. Those personnel did train at Vieques.

Senator INHOFE. But not live fire training. It was inert.

Secretary ENGLAND. That is correct, sir. But they did do their training at Vieques. My understanding is that the findings of that do not relate that to Vieques. So I would not agree with that finding, sir.

Senator INHOFE. Let me read from the report of that accident that took place on March 12 of this year: "Discrepancies were noted in the deployment certification message"—and this would have been 5 months before—with regard to amphibious warfare CAS—that is close air support; it is a submission of amphibious warfare. "Some of those comments regarded the lack of live fire training that was available during the strike missions."

Later on it says: "The commander and the deputy commander stated that they actively sought close air support opportunities whenever possible, but the limiting factor was range availability." They were talking about Vieques.

Secretary ENGLAND. I do not believe, however, sir, there is a relationship between those comments and the specific accident that occurred.

Senator INHOFE. That is on the accident report of March 12.

Secretary ENGLAND. Yes sir, but it does not relate directly to the situation that occurred.

Senator, I indicated I would be happy to come discuss this subject with you. I am happy to do that, sir. I do believe there is a chain of logic here that is logical and reasonable and in the best interests of our naval services. Otherwise I would not take this position. The last thing I want to do is put our men and women in harm's way. Certainly there is no way that I would ever endorse doing that without adequate training.

The issue here again is to make absolutely certain for some period of time until we can find an alternative that we do have Vieques available to us. That is the risk that in my view has to be

addressed. I believe that is a substantial risk that we face, and that is not being able to use Vieques in the near term, and we do need it for a limited period of time. So this approach is to buy us time to get an alternative. I am convinced this is the best—

Senator INHOFE. I understand that, Secretary England. But you are using my entire 6 minutes on this one justification and I do not agree with it. I believe that live fire training is very, very valuable and it trains much better than inert. I think this report clearly states that they had sought live fire training and were not able to get live fire training.

Let me ask Admiral Clark and General Jones—there are no two more brilliant military minds in America today, particularly in this rather confined subject. Do you consider the live fire aspect of training to give a better, more qualified job or qualified training than using inert?

Admiral CLARK. I believe that a principle we pursue constantly is train the way we intend to fight, and the more real you can make it the better.

Senator INHOFE. Thank you.

General Ryan—General Jones.

General JONES. I agree with that.

Senator INHOFE. I was very disturbed. This is the first time I heard, during the course of this meeting, Secretary England, that you are now talking about putting together another group and they are going to go out and look again. We have already had the Pace-Fallon report, which studied all sites known at that time as alternative sites for unified training. We had the Rush report which had retired admirals and a retired general doing the same thing. Both reports came back and said there is no alternative that can be found out there for this quality.

But now we are talking about lowering the standards, Mr. Chairman, lowering the standards of this training so that it is no longer unified training. I can remember being out on the U.S.S. *Kennedy* and the U.S.S. *Eisenhower* before their East Coast deployments to the Persian Gulf, and it happened by coincidence even though it was both in a confined period of time, that the F-18 pilots told me in a gathering out there on those aircraft carriers, they said—they used the football analogy, and you have heard me state it several times privately and in these meetings, that you can have the very best people out there and you can have the very best football players, you can have the very best quarterbacks, the very best halfbacks. You let me group train over here and let another group train over here and you have your quarterbacks over here, never scrimmaging together, and the day of the big game comes and they lose.

It is the unified training. Now I understand you are saying that you are going to consider a combination of other sites and get away from that unified training.

Before you answer that, let me ask the two experts here. In the unified aspect of this training, primarily three functions take place. You have a marine expeditionary landing, you have live Navy fire, and you have the F-14s and the F-18s up dropping live ammunition. Is it not accurate for me to come to the conclusion that the unified training is much more valuable and does a better job of

training than having them do it in all different areas, such as is now being suggested?

Admiral CLARK. Whether it is your conclusion or anybody else, the reality is that the integration of multiple disciplines is the graduate level exercise and is what our advantage has been, and that is the kind of training that we like to bring people to. All of our certifications seek to maximize that kind of training before we deploy them.

Senator INHOFE. General Jones.

General JONES. I agree with the CNO. I would just go on to say that I hope that in our search for an alternative solution that we will continue to hold to that standard; that is obviously the best thing to be able to do for us, and everything else is not as good.

Senator INHOFE. Let me just address this third thing, with the indulgence of the chair. I think it is important. Secretary England, I agree with you that it is very bad policy to have a referendum. But if you had the choice of having a referendum of self-determination or having a bunch of law-breaking, trespassing political activists kick us off of the land that we own, which is the worse policy?

Secretary ENGLAND. I do not believe that is the choice, Senator, and I would like to first address your first issue that you brought up, because the Pace-Fallon report and the Rush report indeed concluded that there was no direct replacement for Vieques, one for one replacement. Those reports were the basis of a further study that was conducted by the Center of Naval Analysis and they concluded that, while there was not a direct replacement for Vieques, there was a replacement in terms of a combination of bases that would give an equivalent level of training. They recognized that we had to do some changes to some of the bases, but they were existing bases.

So in my judgment there was a foundation to go forward. This decision was not made without any consideration of potential alternatives. So there is a foundation, and they will now use the prior studies that they have done to go forward and look for, to build upon those studies to see if we cannot develop those alternatives previously identified.

So I believe that, while there were earlier reports, there are also later reports that built upon those, that indicate there are opportunities for alternatives.

Senator INHOFE. One last thing. I do not like the idea of the referendum, but we can win the referendum. This notion that is coming out of the White House that we cannot do it, or wherever this came from—I am not sure where this came from, Mr. Secretary. You and I have had many private conversations. We will have more, and I do not want this to be a personal thing because I certainly have the highest regard for you and your abilities. I think you are doing a great job in here.

Frankly, I think you were put in a terrible, awkward situation. I do not envy you at all. But as far as the referendum is concerned, there is a difference here. We are talking about Vieques, which is a municipality of the big island of Puerto Rico. There are 9,300 people on there, of which there are 6,400 voters on that island.

Those people do not like, as a general rule, the politicians and the people who are coming over and protesting on their land from

Puerto Rico. We had an election with three different parties running for election, all of them seeing who could be the meanest to the Navy in order to get elected governor, and the one won who was.

Now we have a situation. I have in my office petitions signed by 2700 registered voters with their social security numbers, their addresses, their telephone numbers, people who live on Vieques, not only supporting the Navy, but wanting to secede from Puerto Rico. Now, with that base we can win the referendum and then just hope we never have another referendum again.

Secretary ENGLAND. If we have one, I hope you are right, Senator. On the other hand, there are over 2,000 people on that island who are suing the Navy.

Senator INHOFE. Well, wait a minute now. Let us talk about trial lawyers going around getting people to sign things saying, if we are able to get a large judgment here would you like to participate in the judgment? That is essentially who those 2,000 people are, and you know it and I know it.

Secretary ENGLAND. Well, it is not clear to me that you will win this election. If you look at all the past results, the indicators are we will not, and if we do not it is a significant embarrassment.

Senator INHOFE. I think we have covered that enough. I would just ask for your full support in helping to win the referendum.

Secretary ENGLAND. If we have a referendum, we will definitely try to win that referendum. I have made that commitment to you before, sir.

Senator INHOFE. Thank you very much.

Secretary ENGLAND. I repeat that commitment.

Senator INHOFE. Thank you.

Senator WARNER. If I might indulge a minute—

Chairman LEVIN. It might be useful to see if any of the names might be on both lists. [Laughter.]

Senator WARNER. I would like to say that in the past few days—I mentioned I had been working in my State. I have visited two ranges in Virginia where there is live firing of artillery and tanks. One of them is at Quantico not more than 25 miles from where we are sitting right here. Am I not correct, General Jones?

General JONES. Absolutely, yes, sir.

Senator WARNER. The other, General Shinseki, is right down there in Blackstone, Virginia, which is the biggest training center on the East Coast, really.

Senator INHOFE. I trained on that range.

Senator WARNER. So we have that going home, and nobody around here is going to have a referendum down in Virginia as long as I am Senator.

Chairman LEVIN. I have a couple more questions on Vieques. I think we appropriated \$40 million that the Navy was to use for economic development down there and a very small amount of that has been used so far. Assuming the referendum goes forward, do you plan on spending all of that money?

Secretary ENGLAND. Senator, I do not know if we will spend all of it, but what we have done so far is spend \$3 million for other agencies for health and environmental type issues. We have \$5 million obligated for small business development and for apprentice-

ship programs, and on Thursday I will review the detailed schedule of all the activities, the activities with a spend plan, to make sure we are spending the money wisely.

It does include, for example, reimbursement for fishermen who cannot fish on the days that we use the range, etcetera. There are a wide range of activities on the island. People are working diligently to schedule those activities in terms of both time and money. I will have that available on Thursday and then I am pleased to make that available to this committee. So we are working that very hard, sir.

Chairman LEVIN. Assuming the referendum goes forward or otherwise, you do plan on spending most of that money; is that correct?

Secretary ENGLAND. Sir, I would expect that would be the case. I do not know if in the time between now and November we can spend it all wisely, but we will definitely have a plan to spend it.

Chairman LEVIN. Well, let us know, if you would, within a week just exactly what your plans are.

Secretary ENGLAND. Yes, I will.

[The information referred to follows:]

Of the \$40 million authorized and appropriated, \$3 million has already been transferred to other Federal agencies (\$1.6 million to Department of Health and Human Services; and \$1.4 million to Department of Interior) for health studies and land management. Of the remaining \$37 million, the Navy has released \$5 million for apprenticeship training and economic development. We are still considering how to spend the rest of the money, but the focus will be on improving health care, economic development, and educational assistance.

Chairman LEVIN. There was a provision in this referendum requirement that if the CNO and the Commandant jointly submit a certification that the range is no longer needed for training, then the requirement for a referendum shall cease to be effective on the date on which the certification is submitted.

Are you prepared, either of you, to sign that certification at this time?

Secretary ENGLAND. I hope not.

Admiral CLARK. No, I am not.

Chairman LEVIN. That was addressed to them.

Secretary ENGLAND. I am sorry, sir.

Admiral CLARK. No, I am not, and I testified on a prior occasion that when the subject came up—and you asked if I was consulted—I raised this issue during the consultations, that for the referendum to be set aside, lacking some other action, the Commandant and I would have to so certify and that I could not do so, and it was said—the comment to me was that they would not ask me to do so.

Chairman LEVIN. General?

General JONES. The same answer, sir.

Chairman LEVIN. Now, the question then arises about 2003. Are either you, Admiral Clark, or you, General Jones, prepared to tell us that there will be a satisfactory alternative that meets the standards that you have set out by the end of 2003? Can you tell us that today, that that will occur?

Admiral CLARK. In answering your question, Mr. Chairman, I would say we have to define “satisfactory.” I am given guidance about the level I am supposed to deploy the battle groups and the

amphibious ready groups, and it is a Charlie 2 rating. The CNA study is based upon the plan that Admiral Bill Fallon put together when he was the Second Fleet commander to pull various pieces together, and we did in fact do that during the time that we were not conducting training on Vieques.

That gets us to a low C-2 level. So if you define "satisfactory" as low C-2, well, then I would tell you that we can do that today. If you ask me if that is where I think I ought to have our forces when we deploy, I would tell you, no, of course, I want them to be in the highest state of readiness they can be. I do not know where that place is today.

Recall, when you asked me to——

Chairman LEVIN. You do not know whether that will be achievable by 2003?

Admiral CLARK. I do not know how to do that today, and that has to be discovered. If you recall our discussion——

Chairman LEVIN. Are you able to tell us—excuse me, Admiral, for interrupting—that will be discovered by the year 2003?

Admiral CLARK. No, I cannot.

Chairman LEVIN. General Jones, can you tell us that that level of training will be discovered, that alternative discovered, by the year 2003? Can you tell us that today?

General JONES. I cannot.

Chairman LEVIN. Secretary England, how can you then tell us that it will be discovered by the year 2003 if your experts here cannot tell us that.

Secretary ENGLAND. Again, sir, I have to go back and rely on the earlier CNA studies that indicated there were alternatives, a combination of bases that would include live fire testing, so that it would give us an equivalent level. That with hopefully additional technology, that we will be able to do it.

It does buy us a considerable period of time. I mean, 2003 is a reasonable time in which to look at alternatives and develop it. So we do have to rely on the fact that we are going to put the best people together on this problem, look at the best set of alternatives, look at technology, and come out with the best answer.

Chairman LEVIN. Base it on a hope, in your words, on a hope.

Secretary ENGLAND. Well, I believe that is a better opportunity for us——

Chairman LEVIN. I understand, but——

Secretary ENGLAND. —than the other side.

Chairman LEVIN. —it is still a hope.

Secretary ENGLAND. Well, it is an expectation, sir. It is based on facts and information.

Chairman LEVIN. I guess the last question on Vieques I have has to do with the governor. Have you received the governor's assurance that, assuming your proposal that you are going to make in the next few days passes, she will use her best efforts to provide non-disrupted training through the year 2003? Have you received that assurance from the current governor?

Secretary ENGLAND. Senator, I believe the only thing she can do is enforce the law. So she can provide security for our facilities. She obviously just cannot keep people from showing up on the island,

but she can provide security for the forces. My belief is she will do that, but I will confirm that with her, sir.

Chairman LEVIN. I am not asking about your belief, though. I am asking about whether or not she has given you assurances that she will use her best efforts to provide uninterrupted training through 2003.

Secretary ENGLAND. The governor has told me that she will indeed uphold the law.

Chairman LEVIN. Do you understand that to mean she would use her best efforts to provide—is that what you understand that to mean? I do not want to use some words that are not——

Secretary ENGLAND. I am trying also to understand, sir. I am trying to make this clear. I think what she would do is provide security, so she will uphold the law in terms of trying to keep trespassers off the Navy property during the times of our testing.

Chairman LEVIN. Would she withdraw the lawsuit?

Secretary ENGLAND. I do not know, sir.

Chairman LEVIN. Have we asked?

Secretary ENGLAND. No, sir, we have not.

Chairman LEVIN. Are you going to?

Secretary ENGLAND. I have had preliminary discussions with the governor. They were, I would say, very preliminary, get acquainted, basically understand each other's position. We have not gone beyond that, sir.

Chairman LEVIN. Thank you.

Senator Warner.

Senator WARNER. Well, Mr. Chairman, those were very good questions and it goes to the heart of the one that I earlier asked: What do we get in return?

I assure you, Mr. Secretary, this committee, if this language comes up, we will all be back in this room and we are going to go over these questions and they will be tougher. I for one am going to petition the chair to bring that governor up here, because I do not think I want you to answer this question, but I know the answer. If she indicates to you that she will uphold the law, has she done that in the period of time between her election and now? I do not think so.

Secretary ENGLAND. Well, she did the last time, sir. My impression is the last time she did indeed put considerable forces in Vieques to uphold the law. So my understanding is that she did do that during the last training session.

Senator WARNER. Well, I would ask you to go back and talk with your commanders, because I have information that the United States military departments are spending a great deal of money in security down there and all types of things. That money is being diverted from readiness and other desperate needs in your department that are going down there to enforce the law of the United States of America, which Puerto Rico accedes to.

Secretary ENGLAND. We definitely augment what she does, sir. There is no question about that.

Senator WARNER. Just an observation, Mr. Chairman and members of the committee. My analysis of the R&D programs across the board for the military departments—correct me if I am wrong, but in the past the Pentagon-sponsored R&D programs certainly made

our country the world's undisputed superpower. The fiscal year 2002 research and development account actually decreases when compared to the 2001 appropriated amount.

Now, time has run out here this morning, but I would have you supply the answer to the record as to what your opinion is with regard to R&D. R&D is the thing that keeps us on the cutting edge. [The information referred to follows:]

RESEARCH AND DEVELOPMENT ACCOUNTS

ARMY RESPONSE

The Army expects significant science and technology advances that will enhance our Objective Force capabilities, and we have focused investments in these areas. The Fiscal Year 2002 President's Budget submission has less funding for science and technology than what was appropriated in fiscal year 2001. However, a comparison of the Fiscal Year 2002 President's Budget submission show a 22 percent increase in real growth. The Fiscal Year 2002 President's Budget submission requests \$1,579 million for advanced technology research and development, which is an increase of \$285 million over the \$1,294 million requested in fiscal year 2001. The Army's commitment to maintaining this investment in research and development is critical for our successful transformation to the Objective Force.

NAVY RESPONSE

The fiscal year 2002 budget provides a very robust RDT&E program, and satisfies our highest priority research and development needs. As compared to the fiscal year 2002 estimates in the Fiscal Year 2001 President's Budget Future Year's Defense Plan, the Navy's RDT&E has increased by more than \$1.9 billion. The increase provides additional funding for a number of programs, including DD-21, CVN(X), *Virginia* class submarine, SH-60R, Anti-Terrorism/Force Protection, and Science and Technology efforts.

AIR FORCE RESPONSE

The Air Force Readiness portion of the overall R&D budget changes from \$8.6 billion in fiscal year 2001 to \$8.5 billion in fiscal year 2002, a net reduction of \$0.1 billion.

This \$0.1 billion reduction is primarily attributed to a combination of one-time congressional actions in fiscal year 2001 (\$+.5 billion), and various fiscal year 2002 programmatic changes, the most significant being the transfer of the Space Based Laser, Airborne Laser, and Space Based Infrared System (SBIRS) Low programs to the Ballistic Missile Defense Organization (BMDO) (\$ - .6 billion).

Senator WARNER. Lastly, we have not said much this morning about our CINC structure. For those watching this hearing, we have worldwide the commanders who rely on you to prepare the forces by way of equipment, readiness, and the training such that they can use those forces as a deterrent and then, if necessary, actual combatants.

Now, it is interesting. The quarterly readiness reports to Congress identify a number, around 90, of CINC-identified readiness-related deficiencies. About 30 of these deficiencies are listed as category 1 deficiencies, which entails significant warfighting risk to the execution of our national military strategy. That is risk beginning on the battlefield to the individual soldier, sailor, airman, and marine, and then to the conclusion of the political decisionmakers to employ those forces.

Most of the specific deficiencies have been reported for the past several years and have not as yet been effectively addressed. Does this budget provide the necessary resources to address these CINC-identified readiness deficiencies? Again, I will ask that for the record, given the time, Mr. Chairman.

[The information referred to follows:]

CINC-IDENTIFIED READINESS DEFICIENCIES

ARMY RESPONSE

The Fiscal Year 2002 President's Budget submission provides the resources necessary to address CINC-identified deficiencies at an acceptable level of risk. The Army will continue to use the Department of Defense's Joint Monthly Readiness Review process to provide the appropriate level of visibility to these programs. This review examines each program to make recommendations to senior level officials as the level of risk that can be accepted and still meet the requirements to execute our National Military Strategy.

NAVY RESPONSE

Three of the six CINC Class "A" readiness deficiencies that require Navy funding have been adequately funded in the fiscal year 2002 budget. However, while additional resources were applied in the fiscal year 2002 budget for preferred munitions, engine maintenance backlogs, and aviation spares, these deficiencies were not funded at levels necessary to eliminate the identified shortfalls.

AIR FORCE RESPONSE

The CINC-identified deficiencies are addressed at an acceptable level of risk in the Amended Fiscal Year 2002 President's Budget. Air Force components of each Unified Command are constantly assessing requirements to insure we are aware of CINC's warfighting priorities.

Chairman LEVIN. Thank you, Senator Warner.

I want to thank all of our witnesses this morning. It has been a long hearing. There are a number of things that have been requested for the record already. Senator Warner also raised the question of Goldwater-Nichols. With his agreement on this since he raised it, I think it would be useful that we ask them for what suggested changes they might make. We made reference to a number of them, and that they supply those for the record.

There was a question that I thought you raised very appropriately and, since a number of our witnesses said that there were a number of other areas in Goldwater-Nichols that they would make some suggested changes to, that we ask them for the record to submit those changes. So we would ask each of you to do that within a week or so.

[The information referred to follows:]

ARMY RESPONSE



**UNITED STATES ARMY
THE CHIEF OF STAFF**

August 17, 2001

The Honorable Carl Levin
Chairman
Committee on Armed Services
225 Russell Senate Office Building
United States Senate
Washington, DC 20510

Dear Senator Levin:

During the Senate Armed Services Committee Hearing on July 10, 2001, you asked each member of the Joint Chiefs for suggested changes to the Goldwater-Nichols Department of Defense Reorganization Act. Goldwater-Nichols has generally accomplished its intent and purpose of defense reform, but more can be done.

At Enclosure 1 are broad ideas to strengthen defense reform, and some thoughts on what could be done to strengthen the national security of the United States -- to better apply all the elements of national power. The next area of major reform to strengthen our national security is to improve interagency coordination -- the Goldwater Nichols Act improved joint coordination and a similar effort should be undertaken to improve interagency coordination.

At Enclosure 2 are very specific recommendations on improvements to the Goldwater-Nichols Department of Defense Reorganization Act for The Army -- supporting rationale is included with each recommendation.

Thank you for this opportunity to provide these thoughts and suggestions.

Very respectfully,

A handwritten signature in black ink, which appears to read "Eric Shinseki".

Eric K. Shinseki
General, United States Army

Enclosures

Enclosure 1 - - Overall Recommendations

This enclosure contains broad ideas to strengthen defense reform, and some thoughts on what could be done to strengthen the national security of the United States - - to better apply all the elements of national power. The next area of major reform to strengthen our national security is to improve interagency coordination - - the Goldwater-Nichols Department of Defense Reorganization Act improved joint coordination and a similar effort should be undertaken to improve interagency coordination.

Defense Reform. The goals of Congress in enacting defense reforms, as reflected in section 3 of the Goldwater-Nichols Department of Defense Reorganization Act, can be summarized as strengthening civilian control; improving military advice; placing clear responsibility on the combatant commanders for the accomplishment of their missions; ensuring the authority of the combatant commanders is commensurate with their responsibility; increasing attention to the formulation of strategy and to contingency planning; providing for more efficient use of defense resources; and enhancing the effectiveness of military operations and improving the management and administration of the Department of Defense. In general Goldwater-Nichols accomplished its intent; however there were also areas where we can do more - - these areas are:

- The planning programming budget system process must be revised from a budget driven system to a policy/planning driven system.
- The Department needs acquisition reform to take advantage of the new business cycles and models critical for technology.
- While the Chairman of the Joint Chiefs of Staff is and should remain the principal military advisor, the role of all of the members of the Joint Chiefs of Staff, in providing their own individual military advice to the President and Secretary of Defense should be made more clear.
- The future role of Joint Forces Command needs to be reassessed given its current evolutionary direction toward the increasing exercise of authority in many arenas in which the Military Departments have planning and budgeting responsibility.
- The legislated timelines for the Quadrennial Defense Review may not be appropriate.
- Joint officer requirements should be reevaluated to sharpen the focus on developing joint warriors and at the same time providing more flexibility to lessen PERSTEMPO strains.
- The joint requirements process needs to be simplified
- Consider further consolidation of common functions such as intelligence.
- There is continuing tension between the short term views of combatant commanders, driven by their operational horizon, and the long term views of services, driven by the research and development, acquisition, and professional development cycles.
- The tension between Service training and joint training needs to be addressed; this also applies to readiness requirements.

Interagency Reform. The next area of major reform to strengthen our national security is to improve interagency coordination. Some strategic concepts are:

- Improving the National Security structure to integrate the economic, political, information, and military instruments of power for unity of effort.
- Consider legislation to create interagency level “unity of effort” for operational national security concerns.
- Every attempt should be made to align different interagency areas of operation/responsibility in a complementary manner.
- Address the requirement for interagency training of military officers to serve in interagency positions.
- Consider creation of regionally-focused inter-agency coordination structures, paralleling the geographic areas assigned to the combatant commanders, with comparable levels of delegated authority to the regional agency officials, to allow more effective regional cooperative effort among all the agencies relevant to our national security mission.

Enclosure 2 – Specific Army Recommended Changes

This enclosure contains very specific recommended changes to the Goldwater-Nichols Department of Defense Reorganization Act. All section references are to sections of title 10, US Code, as amended by Goldwater-Nichols Department of Defense Reorganization Act and subsequent related legislation. Language to be deleted from the statutes is shown in red with “line through” marks; language to be added is shown in blue, bolded type. The narrative explanation of the purpose of each change is shown in green italicized type.

I. Changes designed to restore the role intended by Congress for the Chief of Staff of the Army and other Service Chiefs to continue to serve as advisors to the National Command Authority, while continuing to recognize the role of the Chairman as the principal advisor.

Sec. 113. Secretary of Defense

(a) There is a Secretary of Defense, who is the head of the Department of Defense, appointed from civilian life by the President, by and with the advice and consent of the Senate. A person may not be appointed as Secretary of Defense within 10 years after relief from active duty as a commissioned officer of a regular component of an armed force.

(g) (1) The Secretary of Defense, with the advice and assistance of the Chairman of the Joint Chiefs of Staff, shall provide annually to the heads of Department of Defense components written policy guidance for the preparation and review of the program recommendations and budget proposals of their respective components. Such guidance shall include guidance on -

- (A) national security objectives and policies;
- (B) the priorities of military missions; and
- (C) the resource levels projected to be available for the

period of time for which such recommendations and proposals are to be effective.

(2) The Secretary of Defense, with the approval of the President and after consultation with the Chairman of the Joint Chiefs of Staff, shall provide to the Chairman written policy guidance for the preparation and review of contingency plans. Such guidance shall be provided every two years or more frequently as needed and shall include guidance on the specific force levels and specific supporting resource levels projected to be available for the period of time for which such plans are to be effective.

(3) In preparing his guidance pursuant to this subsection, the Secretary of Defense shall consider any matters submitted pursuant to section 151(d) of this title by any member of the Joint Chiefs of Staff (other than the Chairman).

PURPOSE: To reinforce, in the Defense Planning Guidance context, the role of the Chief of Staff of the Army as one of the Secretary of Defense's military advisors, and to prompt and provide political cover for formal "in addition to or disagreement with" advice from the Chief of Staff of the Army on the Defense Planning Guidance under his existing (but wholly unused) right to do so under 151(d) on any matter the Chairman of the Joint Chiefs of Staff engages on.

Sec. 151. Joint Chiefs of Staff: composition; functions

(a) Composition. - There are in the Department of Defense the Joint Chiefs of Staff, headed by the Chairman of the Joint Chiefs of Staff. The Joint Chiefs of Staff consist of the following:

- (1) The Chairman.
- (2) The Vice Chairman.
- (3) The Chief of Staff of the Army.
- (4) The Chief of Naval Operations.
- (5) The Chief of Staff of the Air Force.
- (6) The Commandant of the Marine Corps.

(b) Function as Military Advisers. - (1) The Chairman of the Joint Chiefs of Staff is the principal military adviser to the President, the National Security Council, and the Secretary of Defense.

(2) The other members of the Joint Chiefs of Staff are military advisers to the President, the National Security Council, and the Secretary of Defense as specified in subsections (d) and (e).

(c) Consultation by Chairman. - (1) In carrying out his functions, duties, and responsibilities, the Chairman shall, ~~as he considers appropriate~~, consult with and seek the advice of -

- (A) the other members of the Joint Chiefs of Staff; and **as he considers appropriate**
- (B) the commanders of the unified and specified combatant commands.

(2) Subject to subsection (d), in presenting advice with respect to any matter to the President, the National Security Council, or the Secretary of Defense, the Chairman shall, ~~as he considers appropriate~~, inform the President, the National Security Council, or the Secretary of Defense, as the case may be, of the range of military advice and opinion with respect to that matter.

PURPOSE: While making the Chairman of the Joint Chiefs of Staff the principal military advisor to the National Command Authority, Congress contemplated that the Service Chiefs would remain key National Command Authority advisors; over time, their role has essentially become one of serving as advisors to the Chairman of the Joint Chiefs of Staff only as the Chairman of the Joint Chiefs of Staff considers "appropriate," rather than to the National Command Authority. These changes are designed to return the Chiefs to a more central role, while preserving the primacy of the Chairman of the Joint Chiefs of Staff. Under 151(d)(2), the Chairman of the Joint Chiefs of Staff would retain the right to provide advice without consultation in emergencies or as directed by the National Command Authority (as in, for example, when the President contacts the Chairman of the Joint Chiefs of Staff directly seeking immediate advice).

(d) Advice and Opinions of Members Other Than Chairman. - (1) A member of the Joint Chiefs of Staff (other than the Chairman) may submit to the Chairman advice or an opinion in disagreement with, or advice or an opinion in addition to, the advice **to be** presented by the Chairman to the President, the National Security Council, or the Secretary of Defense. If a member submits such advice or opinion, the Chairman shall present the advice or opinion of such member at the same time he presents his own advice to the President, the National Security Council, or the Secretary of Defense, as the case may be.

PURPOSE: Mostly tonal, but to reinforce the point that the consultation by the Chairman of the Joint Chiefs of Staff with the Joint Chiefs must whenever possible occur before his advice to the National Command Authority, rather than in an "after the fact" manner.

(e) Advice on Request. - The members of the Joint Chiefs of Staff, individually or collectively, in their capacity as military advisers, shall provide advice to the President, the National Security Council, or the Secretary of Defense on a particular matter when the President, the National Security Council, or the Secretary requests such advice.

(f) Recommendations to Congress. - After first informing the Secretary of Defense, a member of the Joint Chiefs of Staff may make such recommendations **to the President, the National Security Council or any member thereof, or** to Congress relating to the Department of Defense as he considers appropriate.

PURPOSE: To clarify and strengthen the continuing role of the Service Chiefs as independent military advisors to the President, the Secretary of Defense, and the National Security Council. This is the mirror image of the "advice upon request of the National Command Authority" role for the Joint Chiefs specified in 151(e) - a "push" mode rather than a "pull" mode. While a Chief could only do this so many times before losing his effectiveness, it is important to reinforce their role as direct and independent advisors to the National Command Authority, not just "advisors to the Chairman of the Joint Chiefs of Staff".

III. Changes relating to the role of the Chief of Staff, Army vis-à-vis the Chairman of the Joint Chiefs, the Combatant Commanders, and the Office of the Secretary of Defense in major programmatic matters (see below for issues internal to Department of the Army).

Sec. 181. Joint Requirements Oversight Council

(a) Establishment. – The Secretary of Defense shall establish a Joint Requirements Oversight Council in the Department of Defense.

(b) Mission. – In addition to other matters assigned to it by the President or Secretary of Defense, the Joint Requirements Oversight Council shall –

(1) assist the Chairman **and the other members** of the Joint Chiefs of Staff in identifying and assessing the priority of joint military requirements (including existing systems and equipment) to meet the national military strategy;

(2) assist the Chairman **and the other members of the Joint Chiefs of Staff** and in considering alternatives to any acquisition program that has been identified to meet military requirements by evaluating the cost, schedule, and performance criteria of the program and of the identified alternatives; and

(3) as part of its mission to assist the Chairman **and the other members of the Joint Chiefs of Staff** in assigning joint priority among existing and future programs meeting valid requirements, ensure that the assignment of such priorities conforms to and reflects resource levels projected by the Secretary of Defense through defense planning guidance.

PURPOSE: To reinforce the role of the other members of the Joint Chiefs of Staff on programmatic matters for which the Chairman of the Joint Chiefs of Staff has a role or function. As the Joint Requirements Oversight Council continues to grow in importance, affirmative recognition of the role of the Chiefs is vital.

(c) Composition. – (1) The Joint Requirements Oversight Council is composed of –

(A) the Chairman of the Joint Chiefs of Staff, who is the chairman of the Council;

(B) an Army officer in the grade of general: **the Chief of Staff of the Army;**

(C) a Navy officer in the grade of admiral: **the Chief of Naval Operations;**

(D) an Air Force officer in the grade of general; and **the Chief of Staff of the Air Force; and**

(E) a Marine Corps officer in the grade of general. **the Commandant of the Marine Corps.**

(2) Members of the Council, other than the Chairman of the Joint Chiefs of Staff, shall be selected by the Chairman of the Joint Chiefs of Staff, after consultation with the Secretary of Defense, from officers in the grade of general or admiral, as the case may be, who are recommended for such selection by the Secretary of the military department concerned.

(2) The functions of the Chairman of the Joint Chiefs of Staff as chairman of the Council may only be delegated to the Vice Chairman of the Joint Chiefs of Staff. A **Service Chief can only be represented by Vice Chief of Service, and in the absence of both the Chief and Vice Chief, another senior general officer could represent the Service who is recommended for selection by the Secretary of the military department concerned.**

PURPOSE: Specifies in law the membership of the Joint Requirements Oversight Council rather than making the membership subject to the nomination of the Service Secretary and the approval of the Chairman of the Joint Chiefs of Staff. Should enhance the authority and roles of the members of the Joint Requirements Oversight Council vis-à-vis the Chairman of the Joint Chiefs of Staff and Vice Chairman of the Joint Chiefs of Staff, as well as within their own military departments.

IV. Changes relating to the roles and functions of the Chief of Staff of the Army and Army Staff within the Department of the Army.

Sec. 3013. Secretary of the Army

(a) (1) There is a Secretary of the Army, appointed from civilian life by the President, by and with the advice and consent of the Senate. The Secretary is the head of the Department of the Army.

(f) The Secretary of the Army may assign such of his functions, powers, and duties as he considers appropriate to the Under Secretary of the Army, **the Chief of Staff of the Army**, and to the Assistant Secretaries of the Army. Officers of the Army shall, as directed by the Secretary, report on any matter to the Secretary, the Under Secretary, **the Chief of Staff of the Army**, or any Assistant Secretary.

Sec. 3014. Office of the Secretary of the Army

(a) There is in the Department of the Army an Office of the Secretary of the Army. The function of the Office is to assist the Secretary **and the Chief of Staff** of the Army in carrying out his responsibilities.

PURPOSE: To reflect a structure wherein the Secretary of the Army, the Under Secretary of the Army, and the Chief of Staff of the Army form the "senior leadership team", and to recognize the historically accurate status of the Chief of Staff of the Army to one below the Secretary of the Army and the Under Secretary of the Army and above the Assistant Secretaries of the Army.

(c) (1) The Office of the Secretary of the Army shall have sole responsibility within the Office of the Secretary and the Army Staff for the following functions:

- (A) Acquisition.
- (B) Auditing.
- (C) Comptroller (including financial management).
- (D) Information management.
- (E) Inspector General.
- (F) Legislative affairs.
- (G) Public affairs.

(2) The Secretary of the Army shall establish or designate a single office or other entity within the Office of the Secretary of the Army to conduct each function specified in paragraph (1). No office or other entity may be established or designated within the Army Staff to conduct any of the functions specified in paragraph (1).

(3) The Secretary shall prescribe the relationship of each office or other entity established or designated under paragraph (2) to the Chief of Staff and to the Army Staff and shall ensure that each such office or entity provides the Chief of Staff such staff support as the Chief of Staff considers necessary to perform his duties and responsibilities.

(d)(1) Subject to paragraph (2), the Office of the Secretary of the Army shall have sole responsibility within the Office of the Secretary and the Army Staff for the function of research and development.

(2) The Secretary of the Army ~~may~~ **shall** assign to the Army Staff responsibility for those aspects of the function of research and development that relate to military requirements and test and evaluation.

PURPOSE: To require that the Army Staff have the lead role in determining military requirements (needed capabilities) to form the objectives for the research and development and acquisition functions done within the Secretariat. This is the division of labor that Congress intended, but which has begun to fray. This change is also reflected in changes to the "Army Staff statutory charter", sections 3031 and 3032. See below.

(3) The Secretary shall establish or designate a single office or other entity within the Office of the Secretary of the Army to conduct the function specified in paragraph (1)

(4) The Secretary shall prescribe the relationship of the office or other entity established or designated under paragraph (3) to the Chief of Staff of the Army and to the Army Staff and shall ensure that each such office or entity provides the Chief of Staff such staff support as the Chief of Staff considers necessary to perform his duties and responsibilities.

Sec. 3017. Secretary of the Army: successors to duties

If the Secretary of the Army dies, resigns, is removed from office, is absent, or is disabled, the person who is highest on the following list, and who is not absent or disabled, shall perform the duties of the Secretary until the President, under section 3347 of title 5, directs another person to perform those duties or until the absence or disability ceases:

(1) The Under Secretary of the Army.

~~(2)~~ (2) The Chief of Staff.

~~(3)~~ (3) The Assistant Secretaries of the Army, in the order prescribed by the Secretary of the Army and approved by the Secretary of Defense.

~~(4)~~ (4) The General Counsel of the Department of the Army.

PURPOSE: Reinforces the role of the Chief of Staff of the Army as the third-ranking official in the Department of the Army (after the Secretary of the Army, the Under Secretary

of the Army) by making him next in line after the Under Secretary of the Army to succeed to the duties of the Secretary of the Army. Currently, the Chief of Staff of the Army falls after the Assistant Secretaries of the Army and the General Counsel, which implies an inferior role for the Chief of Staff of the Army to that of those officials.

Sec. 3031. The Army Staff: function; composition

(a) There is in the executive part of the Department of the Army an Army Staff. The function of the Army Staff is to assist the Secretary **and the Chief of Staff** of the Army in carrying out his responsibilities.

PURPOSE: Reinforces the Chief of Staff of the Army's role as one of the "triumvirate" by specifying that the Army Staff exists to support both the Secretary of the Army and the Chief of Staff of the Army. See below for change that makes the Chief of Staff of the Army an official supported by, rather than a member of, the Army Staff.

(b) The Army Staff is composed of the following:

~~(1)~~ The Chief of Staff

~~(2)~~ **(1)** The Vice Chief of Staff.

(2) The Director of the Army Staff

~~(3)~~ **(3)** The Deputy Chiefs of Staff.

~~(4)~~ **(4)** The Assistant Chiefs of Staff.

~~(5)~~ **(5)** The Chief of Engineers.

~~(6)~~ **(6)** The Surgeon General of the Army.

~~(7)~~ **(7)** The Judge Advocate General of the Army.

~~(8)~~ **(8)** The Chief of Chaplains of the Army.

~~(9)~~ **(9)** The Chief of Army Reserve.

~~(10)~~ **(10)** Other members of the Army assigned or detailed to the Army Staff.

~~(11)~~ **(11)** Civilian employees of the Department of the Army assigned or detailed to the Army Staff.

(c) Except as otherwise specifically prescribed by law, the Army Staff shall be organized in such manner, and its members shall perform such duties and have such titles, as the Secretary or the Chief of Staff may prescribe.

PURPOSE: Removes the Chief of Staff of the Army from the list of members of the Army Staff, but retains a role for the Chief of Staff of the Army in the direction of the Army Staff – making the Chief of Staff of the Army a recipient of Army Staff support, not just the

senior member of the Army Staff supporting the Secretary of the Army. Adds the Director of the Army Staff as part of the Army Staff.

Sec. 3032. The Army Staff: general duties

(a) The Army Staff shall furnish professional assistance to the Secretary, the Under Secretary, **the Chief of Staff**, and the Assistant Secretaries of the Army ~~and to the Chief of Staff of the Army:~~

PURPOSE: The change in order is to be consistent with the thematic of a number of these changes – placing the Chief of Staff of the Army below the Assistant Secretaries of the Army but “above” the Assistant Secretaries of the Army. This is really, to the side of, rather than “above”, since the Chief of Staff of the Army would not supervise the Assistant Secretaries of the Army in the Secretariat.

(b) Under the authority, direction, and control of the Secretary of the Army, the Army Staff shall -

(1) subject to subsections (c) and (d) of section 3014 of this title, prepare for such employment of the Army, and for such recruiting, organizing, supplying, equipping (including those aspects of research and development assigned by the Secretary of the Army), training, servicing, mobilizing, demobilizing, administering, and maintaining of the Army, as will assist in the execution of any power, duty, or function of the Secretary or the Chief of Staff;

(2) investigate and report upon the efficiency of the Army and its preparation to support military operations by combatant commands;

(3) prepare detailed instructions for the execution of approved plans and supervise the execution of those plans and instructions;

(4) as directed by the Secretary or the Chief of Staff, coordinate the action of organizations of the Army; and

(5) perform such other duties, not otherwise assigned by law, as may be prescribed by the Secretary.

(c) The Army Staff shall also provide assistance to:

(1) the Chief of Staff in performing his duties under sections 151 and 3033(e) of this title; and

(2) the Vice Chief of Staff in performing his duties under sections 181 and 3034(e) of this title.

PURPOSE: This section, because of the absence of the lead line “under the authority direction and control of the Secretary of the Army”, provides a clear basis for the Army Staff to work exclusively for the Chief of Staff of the Army when he is performing his role as a military advisor to the Secretary of Defense (i.e., as a member of the Joint Chiefs of Staff).

This approach parallels that in the Chief of Staff of the Army's statutory charter, where the section specifying his Army duties (3033(d) is preceded by the "authority, direction and control by the Secretary of the Army" lead line, and the section specifying his Joint Chiefs of Staff duties (3033(e)) is not.

Sec. 3033. Chief of Staff

(a) (1) There is a Chief of Staff of the Army, appointed for a period of four years by the President, by and with the advice and consent of the Senate, from the general officers of the Army. He serves at the pleasure of the President. In time of war or during a national emergency declared by Congress, he may be reappointed for a term of not more than four years.

(d) Subject to the authority, direction, and control of the Secretary of the Army, the Chief of Staff shall -

(1) ~~preside over the Army Staff;~~

(1) serve as the principal military advisor to the Secretary and the Under Secretary of the Army;

(2) direct the members of the Army Staff in the performance of their duties;

~~(2)~~ **(3)** transmit the plans and recommendations of the Army Staff to the Secretary and advise the Secretary with regard to such plans and recommendations;

~~(3)~~ **(4)** after approval of the plans or recommendations of the Army Staff by the Secretary, act as the agent of the Secretary in carrying them into effect;

~~(4)~~ **(5)** exercise supervision, consistent with the authority assigned to commanders of unified or specified combatant commands under chapter 6 of this title, over such of the members and organizations of the Army as the Secretary determines;

~~(5)~~ **(6)** perform the duties prescribed for him by section 171 of this title and other provisions of law; and

~~(6)~~ **(7)** perform such other military duties, not otherwise assigned by law, as are assigned to him by the President, the Secretary of Defense, or the Secretary of the Army.

PURPOSE: To formalize the role of the Chief of Staff of the Army as the principal military advisor to the Secretary of the Army. Also provides the Chief of Staff of the Army with authority to direct the Army Staff without making him a member of it.

Note: All the changes relating to Internal Department of the Army would have to be replicated by parallel changes in the provisions of Title 10 relating to the headquarters of the other military departments. One of the purposes of Act was to align the Military Departments in this regard, and it is unlikely that Congress would make changes in the Department of the Army without making the same changes in the other Military Departments.

NAVY RESPONSE

The Goldwater-Nichols Act has significantly benefited the Department in numerous ways, including clearly setting forth the responsibilities of the Secretary. I do not presently have any recommendations to change this defense legislation. However, a part of our effort to improve and transform the Department, the Chief of Naval Operations, the Commandant of the Marine Corps, and I will also be examining the impact of the Goldwater-Nichols Act to see whether any future improvements would be beneficial. The Department would also welcome the opportunity to participate in any effort by the committee to review the Act.

MARINE CORPS RESPONSE



8 August 2001

Dear Senator Warner,

At the recent Armed Services hearing on the FY02 budget review, you asked of me what changes I think may be warranted in the Goldwater-Nichols Act. I took the question for the record, in order to draft the type of response such a meaningful question deserves. Attached, please find my response.

Again, thank you for the opportunity to respond to the Committee's inquiry, and I look forward to working closely with you on this and other important matters. I have also provided a similar response to Senator Levin.

Semper Fidelis,

A handwritten signature in dark ink, appearing to read "J. L. Jones", is written over the typed name.

JAMES L. JONES
General, U.S. Marine Corps
Commandant of the Marine Corps

The Honorable John Warner
United States Senate
Washington, DC 20510-4601

6 Aug 2001

The Next Round: National Security Reform for a New Century

Question for the Record: Senator WARNER—What changes would you like to see in the Goldwater-Nichols Act?

Response: Mr. Chairman, Senator Warner, members of the committee, thank you for the opportunity to respond to such an important and timely question regarding the future National Security posture of this nation. Since the end of the Cold War, the global environment and strategic landscape that encompass US national security interests have been in a constant state of flux. National security policy makers have been asked to provide the means to keep the peace; preempt and retaliate against terrorists, patrol borders, intervene in civil wars, contain regional tyrants, rebuild nations, react to domestic emergencies; as well as provide humanitarian assistance and disaster relief. Meanwhile we have witnessed an unprecedented increase in the pace of technology development, growth of international markets, and competition for resources.

Clearly, our military forces are a major element in dealing with security challenges now and in the future, and the roles of the Services and Defense Agencies are evolving to meet changing demands. It is equally clear, however, that America must reach a new level of sophistication when it comes to wielding all the elements of national power, each in close coordination with the other. Revision of the Goldwater-Nichols legislation is simply not enough to answer the challenges facing us with regard to national security policy. Necessary changes must come within the context of a more holistic perspective of national security issues, policies, and responses. The existing national security decision-making apparatus—structured as it is for the challenges of the 20th Century—must be transformed into a streamlined process capable of much more proactive, responsive, and finely coordinated policy direction and execution.

Inter-Agency Coordination. National Security Act reform must look at means to change the strategic decision-making process and interagency coordination mechanisms. National security concerns go beyond those of the Department of Defense, National Security Council, or State Department. The Treasury Department, Commerce Department, Energy Department, Justice Department, and others must also have a seat at the forum. The Inter-agency coordination of policy must wield the elements of national power in ways that complement each other. A national security vision must be developed to capitalize on American strengths in economics, business, and technology while recognizing the nuances and avoiding the pitfalls of resentment to US heavy-handedness that can result from free-market globalization, cultural pervasiveness, and American military preeminence. This vision requires changes that extend well beyond the Department of Defense, and will be brought about only through considerable public debate, creative policy change, and courageous legislation and leadership. However, reform of the Inter-agency process must be done in parallel with reform within the Executive Agencies such as DoD.

DoD Reform. The Goldwater-Nichols Act brought about many needed changes and greatly increased the responsibility and authority of the Chairman of the Joint Chiefs, the Joint Staff, and the Combatant Commanders. The Act also “leveled the playing field” between the Services. The Act produced some unintended consequences that should, in my opinion, be addressed in subsequent legislation:

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- Title 10 responsibilities of the Service Chiefs are infringed upon by the chartered responsibilities of a growing Joint Forces Command.
- A more effective mechanism is needed to achieve balance between the long-range institutional perspectives of the Service Chiefs and the more immediate and narrower regional views of the CINCs.
- While there is a well-developed process for identifying and adding Joint Requirements, there is a less effective process to fund those requirements on top of Service-specific requirements that remain un-funded.
- Need more definition of the Role of the Joint Chiefs of Staff as a body.

Additionally, further legislative reform is required to yield more effective fighting force capabilities for the nation:

- Changes to the Secretariat and Service staffs
- PPBS and acquisition reform
- Changes to personnel policies
- Consolidation of common functions.

Joint Forces Command. JFCOM responsibilities are currently too broadly defined and lack deconfliction with Service responsibilities. The focus of JFCOM should be on joint experimentation and integration. JFCOM should be given the resources to ensure that joint concept development and experimentation drive future warfighting doctrine and procedures. JFCOM should not be given acquisition authority. Driving joint doctrine and procedures, in turn, would drive joint requirements for the Services to meet, consistent with their Title 10 responsibilities and their Service core competencies. Rather than having direct influence in the JROC, CINC JFCOM should focus on striking the right balance between Service and Joint experimentation, and on evaluating, prioritizing, and integrating Service proposals for concepts and capabilities. Healthy competition between the Services within the framework of striving to achieve a joint vision will avoid the dangers of a narrowly focused approach. Too much 'group think' and single-minded direction results in a "strategic monism" that could make U.S. forces less effective in the long run. History is replete with examples of this very phenomenon. The cultural "uniqueness" of our Services is one of America's true "asymmetric advantages". The Services have established core competencies that serve the nation well and should be preserved. A rotating JFCOM commander cannot understand them in depth. Proper experimentation and integration will draw the best from these unique competencies and result in effective joint integration of complementary capabilities.

Delineation of Staff Roles. Goldwater-Nichols resulted in several changes that resulted in a shift of power from the Services to Joint entities (particularly the unified commands), and from civilian leadership to the Combatant Commanders. This shift must be readdressed and a better balance must be struck between individual service interests and national interests; between the long-range institutional views of the Service Chiefs and the more immediate perspectives of the CINCs. This is not to side with either the Services or the Joint communities as there are pros and cons to each. Ultimately the division of labor between OSD and the Joint Staff, the Service Staffs, and the CINC Staffs will surface as a critical issue as available resources are applied across competing requirements. Roles must be clarified to prevent further erosion of the Service Chiefs' abilities to preserve the core

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competencies and cultures of their institutions. Excess overhead and redundant processes must be eliminated. It is time to seriously examine merging the Secretariats with the Service staffs, keeping the Service Secretaries in their key role as the civilian leaders, while trimming bloated and redundant staff functions. The same consolidation should be considered for the OSD and Joint Staffs.

Acquisition Reform. The Services are responsible for manning, equipping, and training the forces that the CINCs operationally employ. The Services are also held accountable when old equipment fails, or newly funded equipment is not interoperable with the joint force. Yet, acquisition authority within the department rests primarily with OSD and the Service Secretaries. The authority and role of the Service Chiefs should be strengthened so they have acquisition authority proportional to their responsibility and accountability for training and equipping the force. Presently, DoD spends more money buying items and services from its own Defense Agencies than from the defense industry or other private corporations. Six of the ten entities that have the largest contracts with DoD are *in* DoD. We need to look at privatizing and outsourcing a number of functions that our defense agencies provide. Other focus areas for acquisition reform must include:

- Updating our obsolete and cumbersome budgetary system
 - Our current system was instituted in 1962
 - That system must be made more responsive to the realities of today and the future.
 - Ideally, we need the ability to 'fence' monies against relatively unspecified needs—operational and system architectures evolve within months rather than years.
- Re-connecting R&D with Procurement efforts
 - We lock-in capabilities rather than leaving systems open to evolve and improve
 - We buy in bulk now when we don't know what the rapid pace of change will bring in the near future
 - We look to platforms that try to do all missions, rather than cheaper, perhaps more numerous platforms that can be tailored to changing requirements
- Reforming our purchasing methods to prevent a built-in technology lag
 - A decade between a project's start and its operational delivery should be viewed as failure
 - When a system is finally fielded, it already has an aging shelf life. We take too long to 'acquire'.
 - Acquisition laws and regulations seem to have been written under the principle that, left unchecked, people will do the wrong and/or illegal thing.

Personnel Policy Reform. Careful thought must be given as to what type of service member is needed to perform national security duties in the 21st Century. Skills must be updated to meet the challenges of the future. Skills must include language proficiency, cultural, regional, and historical awareness, and more thorough knowledge of each of the other Services. Sailors and Airmen must appreciate the demands of ground attack and defense. Soldiers must understand naval and air warfare. Service core competency training

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and education must occur within the larger context of joint warfighting. Each Service must understand the unique demands of each other's core competencies so that they can form a more effective joint force. We must do a better job defining the required skills, and then implement creative ways to retain these special and dedicated people once they are trained. We should also increase the exchange of personnel with other participants in the inter-agency process, in defense industry, and in non-governmental organizations with which we will plan and act in times of crisis.

Consolidation of Common Functions. Where possible, we must find ways to reduce or eliminate redundancy of basic functions common to all the Services. Economies of scale can be obtained, but must be balanced between delivering efficiency and wartime effectiveness. Initial functions to explore include logistics, intelligence, medical, and C4. The consolidation of TRANSCOM, DLA, and other logistics entities—integrating them into a single, unified logistics command framework is one such example.

Today we face no immediate vital threat, nor have we suffered a resounding defeat. Absent these effective historical agents for change, meaningful change will not come easily. We must therefore rely on vision and leadership to optimize our national security apparatus and implement reform that ensures continued American preeminence in the coming years. The limited resources with which we strive to maintain readiness, modernize our forces, and transform our capabilities makes the challenge doubly hard. Meaningful reform in our national security processes not only makes policy more responsive to the challenges ahead, but reaps savings that can be reinvested into modernizing and transforming capabilities. None of these benefits can be achieved without specific, top-down direction that transforms the whole of National Security and avoids the pitfalls of tinkering at the margins.

AIR FORCE RESPONSE



DEPARTMENT OF THE AIR FORCE
OFFICE OF THE CHIEF OF STAFF
UNITED STATES AIR FORCE
WASHINGTON DC 20330

The Honorable Carl Levin
Chairman
Committee on Armed Services
United States Senate
Washington DC 20515-6050

5 Sep 01

Dear Chairman Levin

During the 10 July hearing on the DOD Authorization Budget Request, you asked the services to submit to the Committee their suggested changes to the Goldwater-Nichols Act. Attached are the Air Force's recommended changes. We appreciate the opportunity to offer our views and look forward to working with you to implement what we feel are needed revisions to the Act.

Please feel free to contact me or our Director of Legislative Liaison, Major General Leroy Barnidge, at (703) 697-8153, if you have any further questions on the matter.

Michael E. Ryan
MICHAEL E. RYAN
General, USAF
Chief of Staff

**ACTION ITEM
SENATE ARMED SERVICES COMMITTEE
HEARING ON FY02 BUDGET POSTURE HEARING
JULY 10, 2001**

Question: Senator Levin -- Asked Secretary Roche what changes or recommendations he would make to the Goldwater-Nichols Act.

Answer: Secretary Roche - AF recommended changes to the Goldwater-Nichols Act (GNA) can be divided into three categories: (1) recommendations to update joint officer management; (2) a recommendation to update Title 10 guidance for headquarter staffs, and (3) recommendations to improve the exchange of information among the members of the Joint Chiefs of Staff. GNA has enhanced the quality of officers assigned to joint organizations. However, excessive GNA requirements combined with a 35% smaller force, has severely reduced the Services' flexibility to manage personnel in an optimal manner. We need to balance GNA "four pillars"--quality, stability, education, and joint experience with Service needs and relative size.

We propose the following eight recommendations:

- (1) Establish a requirement for regular revalidation of the Joint Duty Assignment List
 - Incorporate a reevaluation of relative priority and total quantity in each review
- (2) Eliminate Joint Professional Military Education (JPME) outplacement rules (currently, 50% of JPME graduates and all Joint Specialty Officers (JSOs) must go to joint jobs)
- (3) Allow automatic JSO qualification for all officers meeting requirements vice separate board
- (4) Award full joint credit for joint short tours (currently, member only gets partial credit)
- (5) Award full joint credit for officers who amass 365 or more days in a Joint Task Force (JTF) Headquarters (currently, no credit is awarded for short stints in JTFs)
- (6) Eliminate the Joint Duty Assignment List (JDAL) fill rate requirement (currently, 50% of the JDAL billets must be filled with JSOs or JSO nominees)
- (7) Eliminate all critical billets (currently, all Joint Critical billets must be filled with JSOs or Services must have a waiver from SECDEF)
- (8) Streamline the Joint Annual Report requirements to Congress
 - Trim number of required reports to those focusing on core GNA issues

The current GNA limits AF Departmental Headquarters (HQ) to 2,639 assigned personnel. Since cap inception "Departmental HQ personnel" has been redefined for DoD-wide use. The redefinition invalidates the original ceiling. The ability to meet expanded AF missions is strained by a 15-year-old baseline. Since GNA passage the AF has reduced overall end strength by almost 40% and total management headquarters by over 40%. Simultaneously, factors like increased contingencies (up 188%), PERSTEMPO (up 397%), aircraft age (up 58%) and Competitive Sourcing and Privatization increased HQ workload.

We recommend the elimination of the arbitrary Departmental Headquarters personnel ceilings and allow the AF and other Services to set manning based on their assigned missions.

To strengthen the flow of information among the members of the Joint Chiefs of Staff (JCS) and to make the flow less dependent on the personal relationships among the members and the operating style of the Chairman, Joint Chiefs of Staff (CJCS):

(1) Require the CJCS to consult with the other members of the JCS and the CINCs prior to providing advice to the President, the National Security Council or the Secretary of Defense (NCA) *unless impractical because of exigent circumstances*. Currently the CJCS need only consult "as he considers appropriate."

(2) Require the CJCS to advise the National Command Authority (NCA) of the range of military advice provided by the JCS. Currently the CJCS need only advise the NCA "as he considers appropriate."

(3) Require the CJCS to provide the members of the JCS with feedback as to the advice provided to the NCA and the response or direction resulting from that advice. Feedback is critical to the members of the JCS to ensure they provide the best advice possible on future issues.

(4) Allow the members of the JCS to provide recommendations or advice to the Secretary of Defense after first informing the CJCS of their intention to do so. This ensures the unfettered flow of ideas and information within the Department of Defense.

GNA depends heavily on the role of the JCS in providing advice to the NCA. To fully meet the intent of GNA the individual members of the JCS must be consulted, have access to information and receive feedback on the actions of the NCA in response to the advice provided.

Senator LEVIN. Also, the shortfall list, if you could do that within a week or so. Senator Warner and others have made other requests for items for the record. We will keep the record open 24 hours for additional requests.

We want to thank all of our witnesses. Again, General Ryan, if this turns out to be—I will not add any word there after that, either "thankfully" or "regrettably"—the last hearing of ours that you attend, we all again want to just give you one big thank you for a career and a lifetime of service.

Senator WARNER. Your family, too.

General RYAN. Thank you, sir. It is an honor to serve.

[Questions for the record with answers supplied follow:]

QUESTION SUBMITTED BY SENATOR CARL LEVIN

1. Senator LEVIN. Admiral Clark, the Fiscal Year 2000 and 2001 Defense Authorizations required the services, commencing on 1 October 2000, to track the "deployment" of service members on an individual basis. It also required that members be paid a per diem allowance of \$100 per day (effective 1 October 2001) if their cumulative days of deployment exceed 401 days out of the preceding 730 days.

What has the Navy done to implement this program, what challenges or unintended consequences has the Navy encountered in the process and what possible measures do you suggest to address these challenges and/or consequences?

Admiral CLARK. In direct compliance with the legislation, the Navy has inaugurated its Individual Personnel Tempo (ITEMPO) Program and is actively tracking the 'deployments' of sailors on an individual basis. In keeping with the spirit and intent of the legislation, the Navy has and is continuing to pursue more equitable and efficient ways to utilize individual members' time away from home and to lessen the impact of attendant high deployment pay on Navy budgets while continuing to

meet our broad spectrum of global commitments. Battle group/unit operational employment schedules for fiscal year 2002 and beyond, for example, are being structured to reflect more time in homeport between major deployments and underway periods. Communities with historically high operational tempo, such as the Seabees and Military Sealift Command, are undergoing fundamental review and restructuring to better comply with the intent of legislation. Similarly, the personnel assignment process has been revamped to more effectively identify and assign personnel to critical sea duty billets to preclude ITEMPO 'busts'. Additionally, maintenance availability for major combatants and support vessels are being evaluated with an eye to better sequencing and locating these within homeports to minimize ITEMPO consequences.

At the same time we move to comply with the intent of the legislation, however, our efforts are exposing a range of unintended consequences which have significant potential to negatively impact our service members and our operational readiness. Operational schedule adjustments instituted to reduce overall deployed days will translate into some global naval forward presence and capability gaps in critical theatres. Similarly, desired adjustments to maintenance availabilities may create contractual conflicts and scheduling issues. While more restrictive personnel assignment policies threaten to reduce the overall distributable inventory and severely limit the options of our personnel vis-a-vis requisite career path requirements and family geographic and financial stability. In essence, it has become clear that the comprehensive consequences of ITEMPO implementation are not yet adequately understood.

The Navy fully supports the underlying premise of ITEMPO legislation; however, with just 9 months of individual ITEMPO related data on file and with current Navy cost estimates indicating up to \$160 million per year in attendant ITEMPO costs, Navy believes it would be prudent to seek legislative relief which extends for 2 years the effective date of implementation of payments to allow more time to gather data and conduct detailed analysis. In so doing the full spectrum of unintended consequences could be better understood and requisite effective measures taken to mitigate them.

QUESTIONS SUBMITTED BY SENATOR EDWARD M. KENNEDY

2. Senator KENNEDY. Secretary England and Admiral Clark, the administration's draft plans for expanded intercontinental-range ballistic missile defense include looking to sea-based defenses. The Navy seems split over this matter, with some advocating a greater Navy role in missile defenses, other than the Navy Area Defense and Navy Theater Defense programs, and others who are concerned over the impact this new mission would have on the number of ships available to the fleet for conventional missions.

What are your views of the impact that using Navy ships for intercontinental-range ballistic missile defense testing or deployment would have on the availability of ships for existing missions?

Secretary ENGLAND and Admiral CLARK. In February, the Secretary of Defense signed out a joint Ballistic Missile Defense Organization and Navy study on how the Navy could supplement the initial land based missile defense site. While this conceptual study indicated that layered defenses, including forward positioned sea-based interceptors and radars could provide operational benefits to an initial land-based defense system, no policy decisions were made to determine the size, deployment or employment of a Naval capability in defense of intercontinental ballistic missiles.

Since the Navy still has not been assigned a Ballistic Missile Defense system role, it remains focused on the Area and Theater Ballistic Missile Defense (TBMD) mission development.

The Navy's top priority in missile defense is to get Navy Area to sea onboard Aegis-equipped cruisers and destroyers in Fiscal Year 2004. Testing of the SPY radar and Aegis computer programs is ongoing at sea using the LINEBACKER ships (U.S.S. *Port Royal* and U.S.S. *Lake Erie*). In addition, extensive land based testing of the SM-2 Block IVA missile and vertical launch systems are ongoing at the White Sands Missile Range. Following the land and sea based testing this year, the Navy expects to conduct final system integration at sea during live missile firings in fiscal year 2003-2004.

3. Senator KENNEDY. General Jones, for months now, we have been asking ourselves what to do with the V-22 Osprey program. Since December of last year, the program has undergone a Mishap Investigation Report and JAG Manual Report for

the December accident that claimed the lives of four marines; the Blue Ribbon Panel Review; and a DOD Inspector General investigation to determine if maintenance records have been falsified—according to the preliminary results of this investigation, it seems that they were.

The administration requested 12 V-22s in its final Fiscal Year 2002 Defense Budget. This number of V-22s is said to be the minimum sustainable rate of production for this aircraft. Yet, to my knowledge, procurement funding provided in fiscal year 2001 for 11 V-22s has not yet been released.

There are many changes that have been recommended for the V-22 program, including those needed to address design and manufacturing problems which resulted in the chaffing of wires and hydraulic lines in the nacelles, safety reporting problems where the program manager didn't know about flight problems that had been detected during operational test and evaluation, and the most disturbing to me—the lack of thorough testing of the NATOPS operations manual. As you may recall, in the December tragedy, this manual instructed that the pilots push the illuminated Primary Flight Control System reset button, but, when they did, the pressed button started an unanticipated, software-related, chain of events that likely resulted in the deadly crash of a potentially air worthy aircraft. This emergency procedure was included in the NATOPS manual, but was never tested and verified in the V-22 simulators.

Will the V-22 program complete the further development and changes necessary to improve the program's safety and reliability record before procurement funding for the 12 fiscal year 2002 aircraft is released?

If not, then these aircraft will have to go through the same modifications that will have to be performed on the 8 Ospreys already manufactured, and the 11 Ospreys from fiscal year 2001.

Does the Navy or Marine Corps know how much these modifications will cost? Has the Navy or Marine Corps provided funds for these necessary modifications in the fiscal year 2002 budget or any future years budgets?

General JONES. No. All developmental changes to improve the safety and reliability of the V-22 will not be completed before the release of fiscal year 2002 funding. However, the aircraft procured in fiscal year 2002 will not be delivered until fiscal year 2004. This should allow time for changes to the aircraft production lines before this lot is produced. In any event, all required modifications to these aircraft will occur before delivery to the fleet. The V-22 program is continuously incorporating changes to improve the aircraft's safety and reliability performance. This process of identifying improvements and incorporating changes has been ongoing and will continue throughout the life of the program.

We will not know the total cost of the modifications until we have ascertained exactly what they are. However, the fiscal year 2001 and fiscal year 2002 budgets (as well as outyear planning) reflect funding to design, develop, test and install corrective actions in the aircraft already delivered as well as those planned to be procured.

4. Senator KENNEDY. Secretary England, will the V-22 program complete the further development and changes necessary to improve the program's safety and reliability record before procurement funding for the 12 fiscal year 2002 aircraft is released?

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Secretary ENGLAND. No, all developmental changes to improve the safety and reliability of the V-22 will not be completed before the release of fiscal year 2002 funding. However, the aircraft procured in fiscal year 2002 will not be delivered until fiscal year 2004. This should allow time for changes to the aircraft production lines before this lot is produced. In any event, all required modifications to these aircraft will occur before delivery to the fleet. The V-22 program is continuously incorporating changes to improve the aircraft's safety and reliability performance. This process of identifying improvements and incorporating changes has been ongoing and will continue throughout the life of the program.

5. Senator KENNEDY. Secretary England, does the Navy or Marine Corps know how much these modifications will cost? Has the Navy or Marine Corps provided funds for these necessary modifications in the fiscal year 2002 budget or any future years budgets?

Secretary ENGLAND. We will not know the total cost of the modifications until we have ascertained exactly what they are. However, the fiscal year 2001 and 2002 budgets (as well as out year planning) reflect funding to design, develop, test, and

install corrective actions in the aircraft already delivered as well as those planned to be procured.

OUTSOURCING AND COMMERCIALIZATION

6. Senator KENNEDY. Secretary Roche, the Air Force has been in the forefront of public-private competition and contracting out. The DOD budget request plans to save millions of dollars with more competition and outsourcing and further commercialization efforts. While I believe that competition is a great way to ensure that the Department of Defense is getting the best value for the taxpayers, it seems that many involved in these efforts have forgotten that competition for work can go both ways.

Are you planning to offer Federal Government employees the opportunity to compete for workload that is done both in-house and outside the government to achieve the most savings and efficiency for the government?

Secretary ROCHE. It has long been the policy of the Federal Government to obtain commercial services from the private sector when it is cost effective to do so. Once it has been determined that government performance of a commercial activity is not required, an A-76 cost comparison may be performed to determine the most cost effective method of performance—in-house or contract.

Normally, contracted activities are not re-competed between the private sector and an in-house government workforce because it has already been determined that government performance is not necessary. However, current OMB, DOD, and Air Force policy provides for contracted workload to be converted to in-house performance if it can be demonstrated, via A-76 cost comparison, that the government can operate the activity on an ongoing basis at a lower cost than a qualified commercial source. Today, many of our A-76 cost comparisons include currently contracted workload as part of the total competition. If the cost comparison demonstrates that in-house performance is more economical, the previously contracted portion can be converted to in-house performance.

DD-21

7. Senator KENNEDY. Secretary England, several of us on the committee are very supportive of the DD-21 program. This ship is the next-generation destroyer for the Navy and is the only near-term solution for shore-fire support for the Marine Corps and the Army.

Earlier this summer, the Navy delayed the selection of the winning team, which will design and build the DD-21. This decision was made, in part, due to a new study, ordered by Under Secretary Aldridge, which is to examine the future shipbuilding program.

Because no future years defense program was submitted with the final fiscal year 2002 defense budget request, we don't know when—or if—DD-21 procurement funding will be forthcoming. The fiscal year 2002 budget only requests research and development funding to keep the program alive.

What is the status of Under Secretary Aldridge's study?

Secretary ENGLAND. I will have to refer you to the Department of Defense on the details of the Shipbuilding Review and the process used to perform it. However, the Navy supported the Office of the Secretary of Defense-led effort with operational and acquisition subject matter experts as required. It is the Navy's understanding that the results of the study will be incorporated as part of the overall Quadrennial Defense Review.

8. Senator KENNEDY. General Jones, is there another means of providing for the Marine Corps shore-fire support requirements other than DD-21?

General JONES. No other system is currently under development that will fully satisfy the Marine Corps' requirements for all-weather, precision and volume naval surface fires at the required ranges.

The 155mm Advanced Gun System, with a family of precision-guided and ballistic ammunition, is being designed specifically for DD-21 as a means to provide both precision and volume fires for expeditionary maneuver forces. Additionally, the Advanced Land Attack Missile, with a family of general use and specialty warheads, will provide responsive fires out to the ranges required to support a vertically lifted Ship-to-Objective Maneuver force. The capabilities provided by the DD-21 and its associated systems remain vital to realizing the full potential of Expeditionary Maneuver Warfare and the conduct of expeditionary operations and sustained operations ashore in a fluid, non-linear battlespace.

9. Senator KENNEDY. Secretary England, do you support the DD-21?

Secretary ENGLAND. Yes, the Navy supports the DD-21 and remains committed to the objectives of the program. This position was reiterated by Under Secretary Pirie in his May 31, 2001, letter temporarily placing the source selection on hold, "While the objectives of the DD-21 program remain valid, it is prudent to afford the Department of the Navy an opportunity to consider if a change in program strategy is warranted based upon the outcome of the respective defense strategy studies."

10. Senator KENNEDY. Secretary England, when will the Department of the Navy be making a decision to pick the winning team for the DD-21?

Secretary ENGLAND. The source selection decision for the DD-21 program will not be made until the Department of the Navy has determined if a change in program strategy is warranted based upon the outcome of the ongoing defense strategy studies, specifically the Department of Defense QDR, Strategic studies and the Future Shipbuilding Program Study.

11. Senator KENNEDY. Secretary England, will you encourage Secretary Rumsfeld to keep the program as you go through the Quadrennial Defense Review?

Secretary ENGLAND. The Navy remains committed to the objectives of the DD-21 program. As you are aware, DD-21 source selection was delayed by the Navy pending the results of several on going defense strategy reviews, specifically the Office of Secretary of Defense's Strategic Review, the Quadrennial Defense Review, and Future Shipbuilding Program study. The Navy is working closely with the Department of Defense on these force structure reviews and is an active advocate for all our future acquisition programs, including DD-21.

UNEXPLODED ORDNANCE (UXO)

12. Senator KENNEDY. Secretary White and General Shinseki, the financial and technical problems of cleaning up unexploded ordnance at all of the Army's bases—open, active, inactive, closing and closed—continues. In Massachusetts, the Army is currently having to remove UXO to keep their contents from further contaminating the sole-source aquifer under the Upper Cape. What resources has the Army invested in both ongoing UXO cleanup efforts and in research and development programs to find better and more effective ways of removing UXO?

Secretary WHITE and General SHINSEKI. In our ongoing UXO cleanup efforts, we are investing nearly \$79.4 million. Of this, we are executing \$53 million as DOD's Executive Agent for Formerly Used Defense Sites, which is a DOD-funded program.

In the last 2 fiscal years, we invested approximately \$19 million in our research, development, and technology programs to find better and more effective ways of identifying, discriminating, and addressing unexploded ordnance and buried munitions. Next fiscal year, we have programmed an expenditure of approximately \$15.3 million in research and development programs.

We are currently conducting a complete inventory of our ranges. When complete, the inventory will assist us in developing the scope of munition-related issues at our ranges.

13. Senator KENNEDY. General Jones, the Pentagon estimates that personnel living in off-base housing currently pay about 15 percent out-of-pocket for housing costs. The goal for next year is to raise the basic allowance for housing to reduce out-of-pocket expenses to about 11.3 percent for the approximately 750,000 service members living off-base. But, it is my understanding that there are areas where military families currently pay much more than the 15 percent out-of-pocket expenses to meet housing costs. For example, military personnel stationed in Southern California and living in off-base housing have felt the impact of the rapidly rising energy costs and pay well above the current 15 percent out-of-pocket goal.

What steps are being taken by the Marine Corps to reduce this expense or mitigate this burden?

General JONES. The 15 percent out-of-pocket cost is a national average. Some marines will pay more than 15 percent while others will pay less. This is not a regional issue and servicemembers in southern California are not different from anywhere else we have marines stationed. Although the Office of the Secretary of Defense establishes BAH rates and updates them on a periodic basis, they do so with Service involvement and the involvement of local commanders. In the particular case of Southern California, throughout the fall of 2000 when the current BAH rates were being developed, it was forecast that the utility portion of the BAH for southern

California would continue to rise into 2001. Instead of using measured utility costs in 2000, costs were forecast by comparing the growth in utility costs from June 1999 with May-July 2000 and then doubling that rate of growth then applying this inflated estimate to the 2001 rates. The actual cost of electricity in southern California has still not yet risen to the inflated level applied to the 2001 BAH rates.

QUESTIONS SUBMITTED BY SENATOR MARY L. LANDRIEU

ARMORED SECURITY VEHICLE (ASV)

14. Senator LANDRIEU. General Shinseki, I've been reading in daily periodicals that the Army intends to terminate the Armored Security Vehicle (ASV) program at the end of fiscal year 2002. The ASV was developed for use in operations other than war to protect military police (MP) units from weapons up to .50 caliber armor piercing ammunition and 12 lb. landmines. What is the rationale for that decision?

General SHINSEKI. The Army does not have plans to terminate the ASV program at the end of fiscal year 2002.

15. Senator LANDRIEU. General Shinseki, is there an Interim Armored Vehicle (IAV) variant for the ASV programmed for MP units? If so, what is this vehicle, when will they be issued to the MPs, what are its capabilities, and what will it cost compared to an ASV?

General SHINSEKI. There is no IAV variant for the ASV programmed for MP units. The IAVs are fielded to the Interim Brigades and not individual MP units. The current plan is to continue to field the ASV to MP units. Therefore, no cost analysis has been performed concerning the use of an IAV in the MP role.

16. Senator LANDRIEU. General Shinseki, what is your plan for providing vehicles for this mission, if ASV is terminated and there is no IAV equivalent?

General SHINSEKI. If the Army were placed in a position where a substitute vehicle would be required for the ASV, the UpArmored High-Mobility Multipurpose Wheeled Vehicle (HMMWV) would be used. The UpArmored HMMWV is already in use in MP units.

QUESTIONS SUBMITTED BY SENATOR JACK REED

17. Senator REED. General Jones, your statement refers to the AAV as a transformational program "intended to achieve a fundamental advance in capabilities by exploiting leap-ahead technology." Could you please elaborate? What is the difference between transformational technologies and modernization for the Marine Corps?

General JONES. To the Marine Corps, transformation is a continuing process that spans decades of innovation and experimentation with the implementation of new systems, operational and organizational concepts. It involves the development of new operational concepts, refinement of enabling capabilities through experimentation, and the development of new organizations, tactics, techniques, procedures and technologies as necessary to turn these concepts into warfighting capabilities.

Modernization, as used by the Marine Corps, explicitly means reshaping the Marine Corps capabilities to meet the future through the selective acquisition of new equipment that will enable the execution of Expeditionary Maneuver Warfare in support of emerging joint warfighting concepts. Modernization leads to increases in capability. Since it is part of an on-going process of Marine Corps combat development, there is not a requirement for a major shift in the way the Marine Corps trains, organizes, and equips operating forces implied in the term "transformation". Modernization is more than simply replacing worn out equipment; rather, effective modernization is our means of opportunistically implementing new technologies in order to enable new concepts and increased warfighting capability.

In this sense, the Advanced Amphibious Assault Vehicle (AAAV) is more than simply a replacement for the 1970s technology of the venerable AAV7A1 that has served the Marine Corps for over 30 years. The AAAV will join the MV-22 and LCAC as an integral component of the amphibious triad that will enable Expeditionary Maneuver Warfare in the 21st century. With an eightfold increase in speed and a range of greater than three times its predecessor, the AAAV will allow immediate, high-speed surface maneuver of marine infantry units as they emerge from ships located over the visual horizon 25 nautical miles and beyond. Projection of these forces will be conducted in a manner that exploits the intervening sea and land terrain to achieve surprise and rapidly penetrate weak points in the enemy's littoral

defenses to seize operational objectives. For the first time in the history of naval warfare, maneuver ashore in a single, seamless stroke will be possible thereby providing both ships and landing forces sufficient sea space for maneuver, surprise, and force protection during power projection operations.

The result is a truly transformational operational capability stemming from a convergence of various modernization programs that, when joined, result in a truly revolutionary gain in warfighting capability.

LONG RANGE POWER PROJECTION

18. Senator REED. Secretary Roche, as recently demonstrated, long-range power projection remains critical to U.S. national security. What are your plans to modernize the U.S. long-range bomber force? Does the fiscal year 2002 budget request begin this modernization process?

Secretary ROCHE. The fiscal year 2002 budget request continues the modernization process via aircraft modifications outlined in the Air Force White Paper on Long Range Bombers. The Air Force established time phased modernization plans—near, mid, and long term modernization initiatives—for the B-52, B-1, and B-2. The purpose of a time phased plan was to outline a program to improve the combat capability of the bomber platforms through integration of precision, gravity and standoff weapons, avionics, computers, communications suites, and maintainability upgrades. The modernization plan will improve bomber fleet lethality, survivability, flexibility, and responsiveness.

SPACE COMMISSION RECOMMENDATIONS

19. Senator REED. All secretaries and chiefs, could you each discuss your views of the Secretary's (SECDEF) decision to implement the recommendations of the Space Commission? How will this initiative effect the Services' roles in this area?

Secretary WHITE and General SHINSEKI. The Commission released its report containing 10 major recommendations in January 2001. The Army concurred with many of the Commission's recommendations, but presented comments about three of the recommendations as outlined below.

The first comment centered on the designation of the Air Force as executive agent (EA) for space. Without a clearly defined description of the responsibilities and authority delegated to the Air Force, it is difficult to assess specific Army impacts. The Army requires additional clarification on issues such as Army role in assisting the EA in maintaining the space program plan; Army responsibilities for developing and funding Service-unique space systems and capabilities; Army authorities with respect to maintaining their own space requirements determination process; the Services' authority for their unique doctrine, strategy, education, training, and operations; the EA-Army relationship with respect to the Joint Requirements Oversight Committee (JROC) requirements process; the Services' right to appeal EA decisions to the Under Secretary of Defense for Space, Intelligence, and Information or any subordinate oversight bodies; and the cost of implementing the Commission's recommendations. The Army anticipates having an opportunity to review and comment on the draft of Office of the Secretary of Defense (OSD) charter to the Air Force that would describe its responsibilities as the space EA and acquisition executive (AE).

A second comment centered on the creation of an Under Secretary of the Air Force (USECAF) and assignment of responsibilities as the Director of the National Reconnaissance Office, and designation as the Air Force AE for space. The report is not clear as to the disposition of the other Services' program executive officers as related to such areas as space control, force enhancement, and force application. Without an EA charter, and without further clarification, the value of assigning the EA duties to a Service instead of a Joint or Defense organization is not clear. Designating the USECAF as the Air Force AE for space would provide a single agency within the Air Force for integrating space funding and acquisition. Again, the Army is seeking an opportunity to review and comment on OSD's draft charter to the Air Force.

A third comment centered on the importance of maintaining the independence of the National Security Space Architect (NSSA) efforts. The Space Commission recommended that the NSSA report to the USECAF. The Army proposes that the existing architecture review process, to include the National Security Space Senior Steering Group and the JROC review process, be maintained. The Army looks forward to working with the Air Force on this subject during the development of the Space Architect memorandum of understanding.

Secretary ENGLAND and Admiral CLARK. The Navy concurs with the recommendations of the Space Commission. We see the report as an opportunity and we look forward to an active role in the implementation of the recommendations to better enable joint land, air, and maritime warfighting using space assets. Space systems are critical to naval warfighting and network centric operations, so it is imperative for Navy to continue to participate—with the Air Force as Executive Agent—as a joint partner in the requirements, science and technology, research and development, acquisition, and operations processes for space systems.

A Naval Review Panel on Space, sponsored by the Under Secretary of the Navy, is currently meeting to help us focus on and address several key areas. These include: the maintenance of an effective naval space cadre of both military and civilian personnel to participate throughout the National Security space organization; strong space science and technology/research and development within Navy to continue to provide innovative space solutions as recommended by the Space Commission; the education of our naval warfighters in all facets of space systems; strategic joint partnerships with other space stakeholders; and the identification of any space-related missions for which Navy may be uniquely qualified.

General JONES. The Marine Corps enthusiastically concurs with, and is actively engaged in supporting the decision of the Secretary of Defense (SECDEF) to implement the recommendations of the Space Commission. The Commission was faced with a balkanized landscape of less than optimally coordinated national security space efforts that lacked a coherent vision. Lack of adherence to military principles of organization had been the fault of the conceptual restriction of space to an information medium. The Commission recognized that the technology-enabled threats and opportunities “in, to, through, and from space” demanded change. The SECDEF’s implementation will now lead to the establishment of singular leadership, unity of effort, and advocacy for this all-important environment, one that could eventually evolve into a warfighting Area of Responsibility (AOR).

The Secretary’s decision to implement fundamental changes comes none-too-soon, and the DOD has an arduous task ahead. Our space-borne Intelligence, Surveillance, and Reconnaissance (ISR) systems, not to mention our military and civil space communications-navigation assets, are extremely vulnerable. For example, the asymmetric anti-satellite (ASAT) threat from less Information Technology (IT)-dependent potential adversaries must be addressed immediately. As the Commission observed, without a superior space protection operational capability and other space control measures, the U.S. could suffer a space version of Pearl Harbor. This could very well occur without the simple pre-space era industrial capacity to effectively compensate for lost military platforms.

Our national dependency on precious few information nodes in space has many causes. These include our military cultural euphoria with IT convenience, a naive confidence in our invincibility atop the strategic high ground, and reluctance within the public and private sectors to bear the cost of space system swivability and robustness in the post-Cold War era. But, given sufficient resources and institutional motivation, the new priority of space in DOD may enable us to effectively respond in time.

For Marine Corps warfighters the potential for improved space-enabled terrestrial battlefield capabilities is more hopeful than ever before. When the Marine Corps vision for national security space was briefed to the Commission we reminded the members that the Marine Corps’ 23rd Commandant, Gen. Wallace M. Greene, was one of the Defense Department’s first space visionaries. As early as 1963 he proposed rapid expeditionary Marine Corps power projection using the space medium, including the sub-orbital, hypersonic transport of small units to crisis hot spots anywhere on earth. Even today, the technical challenges of General Greene’s vision remain great, but the new DOD emphasis could lead to the earlier realization of many other advanced capabilities.

The Commission also recognized that the need for a Space Force, Corps, or Service might emerge in the future. Since the Air Force has been designated the Executive Agent (EA) for space it should rightfully receive the exclusive Title X responsibility for raising such forces. It is noteworthy that the Air Force has been managing approximately 85 percent of the DOD’s military space programs to date. Furthermore, the Air Force already has over 40,000 military and civilians serving in space-related duties, and those positions and personnel will now begin to be managed as a professional space cadre. With its assumption of EA responsibilities, the Air Force will also take under its programmatic cognizance major Navy and Army space programs, as well as the United States’ greatest ISR success legacy, the National Reconnaissance Office (NRO). In coming years Air Force “space forces” can expect to remain terrestrially based, with systems and weapons remaining robotic

or remotely controlled, and primarily operating in support of soldier, sailor, airman, and marine terrestrial warfighters.

However, technology and future crises may bring surprises, and the need for routine manned military space flight and operations in space could emerge. For General Greene's vision of expeditionary marine transport, our Service's environmental connection to space appears secure. But it is the Air Force that will have the charter and responsibility to develop space transport, space warfighting, and other advanced space capabilities; awesome tasks that could change the character and identity of a large fraction of that Service. The history of the emergence of the Air Force from the Army Air Corps should be carefully studied in this regard, and further sensible evolution should not be hindered.

Our military cultural decision to ride the IT bandwagon is a two-edged sword. The cost of global, speed-of-light information dissemination and communications is that USMC terrestrial warfighting victory across the spectrum of conflict will largely hinge on our Nation's ability to exploit and defend assets in the unusually exposed space medium. Therefore, with a small contingent of qualified Marine Corps space professionals, we must increase our influence over space operational and programmatic processes in the future through strategic personnel assignments. The critical nodes in which we are aggressively seeking increased participation are the National Reconnaissance Office (NRO) (legacy ISR acquisition programs and operations), United States Space Command (USSPACECOM) (space warfighting operations), Air Force Space Command (AFSPC) (Joint and multi-user space acquisition programs), the National Security Space Architect (NSSA) (the joint space concepts development and requirements arbitrator for the JROC), and the Joint Staff.

Our cadre's core qualifications will continue to be rooted in the superb educational foundation provided by the Naval Postgraduate School, and could include U.S. Army and Air Force space cadre qualification curriculums in the future. Marines are already assigned to a few of the key nodes noted above, but that participation will now increase, in concert with a larger network identity that operates off of a single, coherent, requirements-based USMC vision. The objective is to have acquisition qualified space cadre marines managing or functioning within all the nodes, particularly in Joint programs at the NRO and AFSPC, to help guarantee the relevance of future weapons, C³, ISR, and other capabilities for USMC warfighters.

It is worth noting that some have questioned the weight that should be assigned to Marine Corps positions on space. Admittedly, of all the services, the Marine Corps space cadre is the smallest, and with the exception of some C4 terminal procurements and a modest experimentation budget, we have no programmatic stake in the approximately \$20B per year that constitutes U.S. national security space. But our Service's space-related warfighter requirement equities are exactly equal. Arguments based on the preservation of Service Total Obligation Authority (TOA) in space programs appear to run counter to the SECDEF's aims for improved national defense through focused purpose and efficiency. Fortunately, the Corps' programmatically neutral broker-warfighter perspective was heard, and we believe it had a useful influence on the outcome.

In summary, the Marine Corps is elevating the priority of space unilaterally. It is up to us to recognize the importance of national security space expertise and commit ourselves to long-term Joint influence during its emergence as a warfighting medium.

Secretary ROCHE and General RYAN. The changes described by the Space Commission and directed by the Secretary will help create a stronger center of advocacy for national security space missions and resources and build the critical mass of space professionals within the Air Force and in the Nation's national security space programs. Implementing the changes directed by the Secretary will strengthen Air Force space management and organization, consolidate the Department's space activities, and provide a focal point for the Department's interaction with the commercial, civil, intelligence, and international space communities.

BLACK HAWK PRODUCTION

20. Senator REED. Secretary White and General Shinseki, the Army has cut the number of Black Hawks procured in fiscal year 2002 from 16 to 12. Could you tell us why this decision was made and the impact it will have? What plans do you have to ensure the much-needed modernization of the Guard units?

Secretary WHITE and General SHINSEKI. In the fiscal year 2001 President's Budget, the Army allocated sufficient funds to procure nine UH-60s in fiscal year 2002. The Army has funded the procurement of 12 UH-60s in the fiscal year 2002 President's Budget submission. This increase is an indication of the Army's commitment

to provide as many Black Hawks as possible to fill the revised aviation force structure, including the Army National Guard force structure, within current Total Obligation Authority.

The Army plans to continue to procure Black Hawks to facilitate the full modernization of the Reserve components. We have identified an unfunded requirement for an additional 10 Black Hawks in fiscal year 2002 to accelerate modernization of the Army National Guard.

QUESTIONS SUBMITTED BY SENATOR BILL NELSON

SPACE COMMAND ORGANIZATION

21. Senator BILL NELSON. Secretary Roche, how quickly should we anticipate changes in the organization of Space Command? For each of you, how will you ensure the missile defense programs BMDO is devolving to the Services will be integrated and interoperable?

Secretary ROCHE. The changes described by the Space Commission and directed by the Secretary will help create a stronger center of advocacy for national security space missions and resources and build the critical mass of space professionals in the Nation's national security space programs. Implementing the changes directed by the Secretary will strengthen Air Force space management and organization, consolidate the Department's space activities, and provide a focal point for the Department's interaction with the commercial, civil, intelligence, and international space communities.

Within the Air Force, the Space and Missile Systems Center (SMC) is planning to transfer from Air Force Material Command (AFMC) to Air Force Space Command (AFSPC) on or about 1 October 2001. This is part of AFSPC's effort to develop a comprehensive approach for managing and organizing Air Force space activities from research and development through acquisition to operations. Further, the practice of dual-hatting CINCSPACE/CINCNOAD with the Commander of Air Force Space Command will end and a separate four-star will be assigned as Commander of Air Force Space Command.

22. Senator BILL NELSON. General Jones, you are on record as calling the Blount Island complex a national asset. What is the mission of the Blount Island complex? What efforts have been made by you and/or the civilian leadership within DOD and the Navy to fund the purchase of this facility?

General JONES. The mission of the Blount Island Complex focuses on attainment, maintenance, and sustainment of all requirements in support of the Marine Corps' Maritime Prepositioning Ships (MPS). Maritime Prepositioning Force (MPF) Maintenance Cycle operations conducted at Blount Island are vital to maintaining the readiness and continued capability of the MPF program. Blount Island is recognized by DOD, the Joint Staff and the commanders in chief (CINCs) as a vital national strategic asset, through its role in support of the MPF program. Since 1986, the MPF Maintenance Cycle for prepositioned equipment and supplies has been conducted at Blount Island. Blount Island is part of the Strategic Enabler entitled "Strategic Mobility", and is an asset, which is critical to the worldwide application of U.S. military power and our military strategy, under the strategic concepts outlined in the National Military Strategy of Forward Presence and Crisis Response. Under these concepts, the MPF program provides rapid and efficient strategic deployment options through strategic siting around the globe for the geographic and combatant CINCs. This enables MPF to be especially responsive to regional crises and disaster relief. With regards to the purchase of Blount Island, we appreciate the support of Congress in funding the first phase of this acquisition and are well underway in executing it.

I have included the second phase within the FYDP and am continuing to work with the Secretary of the Navy and the Office of the Secretary of Defense (OSD) to move it forward in the program. I did submit the project as my number 1 priority for consideration as OSD made final adjustments to the fiscal year 2002 budget. However, their guidance for these final adjustments precluded new footprints, to include Blount Island. That said, I am committed to pursuing earlier programming during the next budget cycle.

POTENTIAL ALTERNATIVES TO VIEQUES

23. Senator BILL NELSON. Secretary England, what is your target date to decide on an alternative to Vieques? What alternatives are you considering?

Secretary ENGLAND. I have a November 6, 2001 deadline to report to the President with alternatives to Vieques, however, there is no specific decision date as yet. I will make a decision as soon as I have all the relevant information, and will review any alternative location or combination of locations that enables the Navy to effectively meet our challenging and demanding training requirements in support of Fleet readiness.

24. Senator BILL NELSON. Secretary England, why is the Navy not taking advantage of the availability of increased dollars to purchase new T-6 training aircraft, especially in view of recent loss of two more Naval aviators in the old T-34 at Pensacola?

Secretary ENGLAND. The T-34C is a safe and reliable aircraft that has sufficient service life remaining and can satisfy Navy requirements for several more years. Navy conducted a prioritized review of Navy programs including Joint Primary Aircraft Training System (JPATS) procurement profiles. In this review all options were investigated, including maintaining T-34C in service longer than previously envisioned. JPATS procurement was deferred to fund more urgent competing priorities. JPATS procurement will resume in the future to take better advantage of service life remaining on the T-34.

The T-34C has an excellent safety record. Over the last 20 years, the mishap rate for the T-34C in the Training Command has been 0.66 mishaps per 100,000 flight hours. The average overall Navy/Marine Corps mishap rate was 2.8 mishaps per 100,000 flight hours for the same period.

QUESTIONS SUBMITTED BY SENATOR STROM THURMOND

25. Senator THURMOND. Secretary England, Secretary White, and Secretary Roche, the Department of Defense has established 2010 as the goal for improving the quality of military family housing. The budget amendment proposes a \$400 million increase in the family housing account to facilitate the achievement of this goal, but focuses the funding on the housing privatization.

Do you believe that housing privatization is the most appropriate method for improving the military family housing stock?

Secretary ENGLAND. DOD is using a three-pronged approach to eliminating its inadequate housing stock. First, Basic Allowance for Housing is being raised to zero out of pocket by fiscal year 2005 in order to eliminate the economic inequities between community and military family housing. Second, the Navy is entering into Public Private Ventures (PPV) where feasible. Third, where PPV is not feasible, the Navy is using Family Housing, Navy appropriated funds to eliminate inadequate housing units.

The Navy was first in DOD to implement PPV in 1996 and will soon privatize additional existing Family Housing units. Having just awarded several PPVs, there is no long-term history on the success of the executing phase of PPVs, property management (Navy awards typically range from 20 to 50 year programs).

PPV Housing has as its primary advantage the ability to accelerate inadequate home elimination by leveraging funds with the private sector. Accordingly, PPV is playing a large role in the Navy's Family Housing program. It is important though that the use of PPV be considered as one of several tools available to improve Navy housing standards. However, due to the long term impact, all housing options should be assessed on their ability to meet each installation's unique housing needs. The Navy accomplishes this by assessing all housing construction, including PPV feasibility assessments, annually on an installation-by-installation basis through the Shore Installations Programming Board (SIPB). The SIPB is comprised of the Fleets and Chief of Naval Operations Ashore Readiness Division. Its charter is to consider regional PPV opportunities while promoting decisions that take both the short and long term PPV impact into account. In some instances it has been determined that PPV is not feasible. This is due to several unique factors which include but are not limited to anti-terrorism force protection concerns (housing is not severable from the installation), existing commercial activity studies, available number of housing units, lack of regional opportunity to partner with other installations, or a poor private sector environment (low growth, high vacancy rates, etc.).

Additionally, the Navy is conducting a Family Housing Functionality Assessment (FA) that should be completed October 2001. This FA is expected to assist in the decision making process by identifying alternatives to traditional family housing asset management; namely, a property management prototype, commercial activity, and PPV.

Current Navy guidance is to use PPV where feasible. The use of PPV quotas though has the potential to introduce long-term risk for short-term objectives as each installation's unique housing requirements may not receive full consideration.

Secretary WHITE. Yes, privatization of our family housing inventory remains a key factor in helping the Army achieve its goal to provide quality housing and improve the well being of soldiers and their families. The Army has an aggressive privatization program utilizing the Military Housing Privatization Initiative Act that Congress granted in 1996 and extended until December 2004. These authorities allow the Services to leverage appropriated family housing funds and assets to attract private-sector capital and expertise to operate, manage, maintain, improve, and construct new housing. By the end of 2005, approximately 62 percent (67,842 units) of the worldwide end-state inventory of 109,355 units is planned for privatization.

Secretary ROCHE. Given the limited MILCON budget for revitalizing 59,000 housing units, and the need to upgrade these units by the OSD goal of 2010, privatizing 27,000 housing units is the most appropriate method to achieve this goal. On average, the Air Force is leveraging its assets by greater than five to one using privatization.

26. Senator THURMOND. Secretary England, Secretary Roche, and General Shinseki, under the current funding profile, will your service achieve the 2010 goal for family housing improvement?

Secretary ENGLAND. Yes. The Navy's current Master Plan eliminates currently identified inadequate homes by fiscal year 2009.

Secretary ROCHE. Our Family Housing Master Plan provides our corporate Air Force strategy to meet the 2010 goal. While we have worked hard to provide an integrated plan which concentrates on fixing our worst housing first, we recognize the realities of budget shortfalls. Recognizing ongoing QDR discussions, the administration has yet to establish our future funding levels beyond fiscal year 2002. However, we are committed to find a solution to revitalize, divest through privatization or demolish inadequate housing by 2010. This commitment will guide our revision to our Family Housing Master Plan in 2002.

General SHINSEKI. Using a mix of traditional military construction and privatization, the Army is able to allocate sufficient resources to eliminate all inadequate Army family housing by 2010.

27. Senator THURMOND. Secretary England, Secretary Roche, and Secretary White, one of Secretary Rumsfeld's more significant goals is to fund facility replacement on a 67-year standard, rather than the almost 200-year cycle under prior funding programs. Although this standard is still short of the industry standard of 57 years, it will significantly increase the readiness of our military installations.

Will the current budget request support the 67-year replacement standard? If not, what are the funding requirements or other initiatives that will allow you to reach the standard?

Secretary ENGLAND. The Navy's amended fiscal year 2002 budget request supports a 113-year recapitalization rate. While still short of the 67-year standard this is a substantial improvement over the previous rate of over 160 years that existed prior to the amended budget. The facility replacement program will require nearly \$600M additional recapitalization funds in fiscal year 2002 to meet the 67-year standard.

Infrastructure reduction initiatives to assist in reaching this standard include planning efforts to identify true requirements, consolidation of facilities where feasible and demolition of aging and excess facilities. Key to consistently achieving the long-range recapitalization goal will be successful implementation of the Defense Department's Efficient Facilities Initiative to realign and reduce base infrastructure.

Secretary ROCHE. No. It would take a fiscal year 2002 add of about \$1 billion to achieve a 67-year replacement cycle investment rate. However, the AF has had to take risk in the infrastructure accounts over the last decade and has a backlog of deteriorated facilities. An additional \$1.7B/year is required to buyout this backlog by 2010.

Secretary WHITE. In fiscal year 2002, the budget request does not support the 67-year replacement standard. An additional \$526 million in fiscal year 2002 is needed to get the total inventory replaced in 67 years. Other initiatives that help the Army reach the 67-year standard include privatization of housing and utilities, leasing facilities to the private sector (i.e., the hospital at Fort Sam Houston), and elimination of excess facilities.

EUROPEAN RESTATIONING PLAN

28. Senator THURMOND. General Shinseki, European Army units continue to be stationed in World War II facilities that limit mission capability, complicate training, drain repair and maintenance resources, and are extremely costly to renovate. To correct this situation the Army is reviewing alternatives to the current stationing plan.

What is the status of the European restationing plan and what is the anticipated cost?

Does this budget provide any funding to initiate the relocation effort? If not, when do you anticipate funding will be available for this transition?

General SHINSEKI. United States Army, Europe (USAREUR) initiated the Efficient Basing-East program to enhance readiness and improve soldier well being through the restationing of a brigade combat team from numerous small installations to the Grafenwoehr area. The goal is to gain efficiency by improving command and control, providing improved training at lesser cost, reducing the USAREUR footprint and operating cost, enhancing force protection, reducing personnel tempo and operational tempo, and reducing manpower overhead and long-term costs by eliminating small, costly, and inefficient installations.

USAREUR continues to develop this initiative in terms of costs and phasing. Current identified costs total \$477.7 million for fiscal year 2003 to fiscal year 2007 for construction, planning and design, Army family housing, and design of other support facilities, i.e., schools, medical facilities, commissaries, post exchanges, etc. If allowed to reprogram identified funding, the net additional cost to USAREUR would be reduced to approximately \$200.2 million.

The Commander in Chief Europe has approved the plan, and the Army is evaluating this initiative along with other military construction projects. The draft 2002 Presidential Budget Future Years Defense Program contains seven projects totaling \$68 million for the restationing. If approved, the initiative will be presented to the Office of the Secretary of Defense and Congress with the intent of gathering full support.

SUSTAINMENT, RESTORATION, AND MODERNIZATION BACKLOG

29. Senator THURMOND. General Shinseki, although the overall funding request for the Army increased by more than \$6.5 billion over fiscal year 2001, the Army reduced the number of tank miles funded by the budget from 800 to 730 miles—reduction of \$300 million. I understand this was done to support facility stabilization.

Despite this significant adjustment, what is the Army's current backlog for real property maintenance?

General SHINSEKI. In fiscal year 2002, the current unfunded backlog to bring our facilities to a C-1 level is \$17.8 billion. The increased level of sustainment funding in fiscal year 2002 needs to continue into the outyears to prevent the backlog from growing.

30. Senator THURMOND. Admiral Clark, in 1999, your predecessor reported that the Navy was experiencing critical skills shortfalls resulting in more than 13,000 gapped billets. Since that time, Congress—working with the Department of Defense—has supported a series of personnel initiatives such as increased pay and health care.

How have these initiatives improved your gapped billets problem?

Admiral CLARK. The At-Sea Enlisted Gap has been reduced from 13,000 in 1993 to less than 5,000 today. This success has resulted from strong leadership combined with the significant pay raises and bold compensation initiatives enacted by Congress in the last 2 years. With the help of Congress, we reinvigorated efforts to retain every eligible sailor by offering new or enhanced officer continuation pays and enlistment/reenlistment bonuses, and increases in base pay. We improved advancement opportunities by gradually increasing the number of sailors in the top six pay grades. We also expanded E4 and E6 High Year Tenure gates and concentrated efforts on reducing attrition. Recruiting and retention successes have allowed us to execute total Navy end strength approaching the 1-percent statutory flexibility above our fiscal year 2001 authorized strength. This has decreased the Gap and improved battlegroup readiness by getting more sailors with the right training to their ships earlier in the pre-deployment cycle. Manning for our fiscal year 2001 battlegroup deployers has been as much as 3–4 percent greater than our fiscal year 2000 deployers across the entire deployment cycle. We are deploying at 98–101 percent manning with as many as 250–360 fewer billet gaps per battlegroup.

31. Senator THURMOND. Admiral Clark, I understand that the Navy has a \$5.0 billion backlog in the repair and maintenance of its facilities. Despite this backlog, the funding requested for real property maintenance increases less than \$90.0 million over the fiscal year 2001 appropriation.

How do you explain such a small increase in the real property maintenance account when the overall Department request for facility sustainment and base operations increased by more than approximately \$3.0 billion?

Admiral CLARK. Due to funding priorities, sustainment, restoration and modernization (SRM) and base operating support funding have been programmed to minimally adequate sustainment levels in fiscal year 2002. While the SRM increase request is only \$90 million, the fiscal year 2002 MILCON funding request represents an increase of \$130 million from the fiscal year 2001 request. Therefore, the total requested increase in facility investment for the Navy is \$220 million.

The current backlog in facilities repair and maintenance (BMAR) is over \$5.0 billion with the critical portion being \$2.6 billion. The Navy is in transition from the BMAR metric to the Facility Sustainment Model and the Installation Readiness Reporting System (IRRS) to improve the identification of facility repair and maintenance investment requirements.

32. Senator THURMOND. General Jones, both you and General Krulak have always made the point that the Marine Corps equipment was showing its age and causing additional work for our marines and cost to our taxpayers. Despite these problems, your budget funds depot maintenance at only 78 percent of requirement. How do you explain the low level of funding for Depot Maintenance and what will be the cumulative effect of this funding shortfall?

General JONES. The Marine Corps must fund a balanced program within the resources we have available. In the past we have funded near-term readiness at the expense of modernization. We can no longer continue this trend. Modernization has now become a readiness issue. We have realized that we must accept some measured risk in the short term in order to modernize our force. The Ground Depot Maintenance Program is funded at 78 percent of the executable requirement in fiscal year 2002. This level of funding will not impact the near term readiness of the operating forces. The \$14 million Depot Maintenance Shortfall on the fiscal year 2002 Unfunded Priority List would fund us to the Office of the Secretary of Defense prescribed goal of 90 percent, but it is not critical to near term readiness.

33. Senator THURMOND. General Jones, the Marine Corps will not recover from the accumulated effect of the procurement holiday which lasted from 1992 to 1999 until well beyond fiscal year 2007.

What is the trade-off of this delay in terms of additional funding for repair parts and maintenance of your aging equipment?

General JONES. The Marine Corps has experienced a rise in the average cost to maintain spare parts for our major end items. That is, the cost per repair has increased. As the Marine Corps faces virtual block obsolescence for many repair parts, we are required to spend more time and money to maintain aging equipment and weapons systems. As ground equipment has continued to age, and because the Marine Corps has yet to reap the benefits of modernization efforts, funding required for consumable and repairable spare parts has continued to grow.

The Marine Corps has begun initiatives to modernize our aging equipment. For example, we are now fielding the Medium Tactical Vehicle Replacement and the HMMWV A2, as well as rebuilding our Assault Amphibious Vehicle. As we continue to modernize equipment we expect the cost of maintaining spares to begin to decline.

NEW SHIP CONSTRUCTION

34. Senator THURMOND. Secretary England, the Navy's budget request reflects a goal for the construction of new ships of 8 to 10 per year. The budget we are considering builds six new ships.

What is the objective of the goal of building 8 to 10 ships annually?

When will you make up the shortfall in this year's ship construction program?

Secretary ENGLAND. The objective of the goal of building 8 to 10 ships annually is to sustain a battle force capable of addressing all likely joint and combined warfighting requirements, overseas presence, and support to contingency operations. The foundation supporting the goal is the 1997 Quadrennial Defense Review and additional requirements articulated in the 30-year shipbuilding plan report provided to Congress in June 2000.

Until we know the results of the ongoing Quadrennial Defense Review and the Secretary of Defense's strategic review, I cannot comment on the extent of the shortfall. Currently, the Navy is limited to procuring six ships per year due to fiscal constraints and competing demands for Navy Total Obligation Authority. In order to build 8 to 10 ships per year, the Navy requires approximately \$3 billion to \$5 billion more in Shipbuilding and Conversion, Navy funding.

35. Senator THURMOND. Secretary England, because the Marine Corps has been flying the CH-46 Helicopter since the 1960s, it is critical to the safety of our marines to find a replacement for the aging workhorse.

Now that the V-22 program has been delayed for who knows how long, are there any alternatives or interim fixes for the CH-46?

Secretary ENGLAND. There have been seventeen Cost and Operational Effectiveness Analyses (COEs) conducted by a diverse series of trusted institutions to determine the most suitable replacement for the CH-46. The V-22 was a very consistent first choice with no clear second choice among the widest possible variety of potential alternatives to replace the CH-46. Each analysis showed that the MV-22 Osprey is the most operationally effective choice and the most cost effective (affordable) choice for the Marine Corps. They revealed that no other options or combination of platforms could provide the balance achieved with the V-22. Other alternatives including mixes or 'silver bullets' offer no real advantage in cost savings or avoidance given the requirement. The bottom line is the V-22 is significantly more capable and cost effective than any alternative. The V-22 is the only alternative that meets the requirement.

Based on current utilization rates, the service life of the CH-46E does not need to be extended to compensate for the delay of the MV-22. The only interim improvement in place for the CH-46E is the Engine Reliability Improvement Program (ERIP). This ERIP will ensure the health and reliability of the CH-46 at a cost of \$200 million. The Engine Reliability Improvement Program is fully funded, and thanks to Congressional support, we were able to start it 1 year early (in this fiscal year). However, ERIP was procured based on a projected retirement schedule of the CH-46. As the delay of the MV-22 becomes more definitive, Marine Aviation will have to examine how many more ERIP kits the Marine Corps will need to procure. The current ERIP cost estimates are \$1.3M per aircraft (then year dollars). Although the CH-46 will endure a delay in the introduction of the V-22, the cost of ownership of the CH-46E will likely continue to rise. Over the past 7 years, flight hour costs and maintenance man-hours-per-flight-hour have increased by approximately 30 percent (in constant fiscal year 2000 dollars).

TRANSFORMATION FUNDING

36. Senator THURMOND. Secretary White, the Army's Transformation is critical not only to the Army, but also to the Nation's future.

Does the fiscal year 2002 budget fully support your Transformation goals? If not, what changes would you propose?

Secretary WHITE. The fiscal year 2002 budget generates sustainable momentum for Army Transformation, although not at optimal levels. We invested in Objective Force research, development, testing, and evaluation to set the stage for modernization of equipment; continued fielding the Interim Brigade Combat Teams; and funded modernization of key Legacy Force systems to enhance force capabilities. We made a number of tradeoffs to ensure a well-balanced Army program and will continue to evaluate competing requirements in our efforts to transform.

RC MODERNIZATION

37. Senator THURMOND. Secretary White, historically, the modernization of the Army National Guard and Army Reserve relied on the cascading of equipment from the active component.

How does this budget request support the modernization of the Reserve components?

Secretary WHITE. This budget focuses on selective upgrades and modernization of key organizations while rebuilding and maintaining existing capabilities in others. Reserve component units that are paired with active component units will be selectively modernized, recapitalized, or rebuilt to attain full interoperability and compatibility with their active component teammates, ensuring current and near-term readiness.

TRAINING RANGES

38. Senator THURMOND. Secretary Roche, one of the concerns I have is that our training ranges are not providing the challenges that our pilots will meet in future combat. For example, the pilots of Shaw Air Force Base training at Poinsett Bombing Range engage emitters that represent 1960s technology rather than the modern systems that our pilots will face over almost any hostile nation.

How does your budget support the upgrading of training ranges in general? Regarding the Poinsett bombing range in South Carolina, I would appreciate it if you answer it for the record.

Secretary ROCHE. Although many technological advances in surface-to-air threats have occurred over the past 40 years, recent conflicts have been against countries which have possessed predominately 1960s and 1970s vintage air defense systems. This fact highlights the need to train against these older systems; however, we cannot count on future adversaries employing older, less sophisticated threat systems. Combat readiness/survivability training for our aircrews must include proficiency training against modern, sophisticated threats.

In general, we have ongoing programs that our fiscal year 2002 budget supports to modernize our existing range electronic warfare threat emitters, weapon scoring systems, and air-to-air combat training systems, and targets through upgrades and procurement of additional items. Our fiscal year 2002 budget also supports modernization of an aging range electronics and telecommunications infrastructure and invests in the development of a new Advanced Threat Emitter System intended to provide simulation of modern threat capabilities, densities, and mobility for combat training. Poinsett Range in particular is scheduled to receive high-fidelity HARM targets to support training of the F-16s at Shaw AFB. Our fiscal year 2002 budget also provides for installation of a Joint Advanced Weapons Scoring System at Poinsett to score practice and inert munitions dropped on the range. Additionally, eight older Mini-Multiple Threat Emitter Systems, are slated for upgrade at Poinsett Range by fiscal year 2004 as part of an ongoing modernization program for this particular emitter system.

39. Senator THURMOND. Secretary Roche, what is the total number of B-52 aircraft in the Air Force's inventory, and what is the number B-52s required to support both the conventional and SIOP missions?

If the number on hand is greater than required, why are they in the inventory?
Secretary ROCHE. [Deleted.]

40. Senator THURMOND. General Ryan, I understand that the average readiness of your combat squadrons is running at approximately 69 percent against a readiness requirement of 92 percent. What are the major causes of this low level of readiness?

Assuming no major changes as a result of the QDR, when will you be able to achieve your readiness requirements at the current funding level?

General RYAN. As of 15 July 01, the overall readiness, measured by percentage of units C-2 or better, of our major operational units is down 22 percentage points while Active Duty stateside combat air force units are down 40 percentage points since 1996. The major causes for the decline are past underfunding (particularly of spare parts), the aging aircraft fleet, a less experienced workforce due to declines in retention, and past years of higher TEMPO.

Our looming backorders caused by past underfunding continue to have a negative effect on readiness. These negative effects include lower mission capable rates, higher cannibalization rates, and added work hours for our people. Older aircraft are subject to organic problems, which are often discovered only after an aircraft ages. As these age-related problems surface, it's possible that they will affect large portions of the fleet. Moreover, older aircraft require more manpower and resources to keep them ready to fight in the future.

Our overall retention rate is also a major cause for the decline in AF readiness. The Air Force failed to achieve our first-term, second-term, and career re-enlistment goals for the past 3 years (fiscal year 1998-2000). Although, we are encouraged by the recent upturn in first-term re-enlistment rates, we continue to remain below our second-term and career re-enlistment goals. Retention challenges also exist for our mid-grade officer corps, not only for our pilots but also for many of our non-rated line officers.

Past years of higher TEMPO has also contributed to the decline in overall readiness. Although, we have seen a significant drop in TEMPO recently, our people are still deploying over three times more often than in 1989 despite the fact that the drawdown reduced the size of the Active-Duty Force to approximately 60 percent of

its former size. This TEMPO exacerbates the negative retention trend because it places a greater burden on those who are forward deployed and those who remain at home. Additionally, the sustained TEMPO not only takes a toll on our people but also on our equipment as we conduct split operations.

Because our current readiness is the result of several years of sustained underfunding, poor retention, TEMPO, and aging systems, it will require several years of substantial and sustained investment to recover readiness.

41. Senator THURMOND. Secretary Roche, the Air Force's current backlog in maintenance and repair of facilities is in excess of \$4.0 billion and is expected to grow to \$5.6 billion by the end of the fiscal year. Despite this significant backlog, the Air Force funded real property maintenance at less than 1 percent of plant replacement value.

What was the basis for the low level of funding for RPM? How long will it take for the Air Force to make up the ever increasing backlog in real property maintenance?

Secretary ROCHE. The Air Force topline supported the priorities of readiness, recruitment and retention, modernization, flying hour and utility cost increases. Unfortunately, the plus up from the recent amended budget was not enough to address facility O&M shortfalls.

If facility sustainment requirements were fully funded, our facility restoration and modernization requirements would be an additional \$1.2 billion per year to buy down the backlog by 2010. This funding would be in addition to a MILCON funded to meet the 67-year facility replacement standard and would allow the Air Force to buy down the backlog.

QUESTIONS SUBMITTED BY SENATOR BOB SMITH

OKINAWA INCIDENT

42. Senator SMITH. Secretary England and Secretary Roche, the July 9th *New York Times* had an article on this latest incident in Okinawa involving a U.S. servicemember and a rape charge, I recognize the importance of Japan in the U.S. security framework in the Pacific and as a partner in missile defense research. However, I have concerns about turning over U.S. servicemembers to the Japanese Government for prosecution. The article states that the Japanese judicial system permits interrogation without a lawyer present and with an interpreter chosen by the police, which it says is "standard Japanese procedure," U.S. demands that a U.S. appointed interpreter be present and a defense attorney were rejected. When did the U.S. cede the rights of these service members to a foreign judicial system and can this be revisited at any point, since it appears that their civil rights under the UCMJ are being violated?

Secretary ENGLAND. Under general international law, a country may exercise criminal jurisdiction over anyone found within its borders. For instance, a nation is not obliged to give any different treatment to a foreign tourist accused of a crime than it would give to one of its own citizens. Unless, that is, it has agreed by treaty to provide special treatment to the foreign national.

One of the functions of a Status of Forces Agreement (SOFA) is to recognize that military personnel invited into a country have special status and are therefore entitled to special treatment under the SOFA. One of the ways host countries typically recognize this status is to grant to the United States the right to exercise its criminal jurisdiction over U.S. service members who commit crimes within the host nation. However, in a number of agreements host nations have reserved the right to exercise criminal jurisdiction in certain types of cases, such as where there is an allegation of a very serious offense committed against someone who is not part of the U.S. force or civilian component. The United States seeks to secure the greatest latitude possible for bringing service members accused of crimes in foreign countries back under its jurisdiction.

In those cases where the host country retains the right to prosecute, the United States seeks, through the SOFA, to secure for the accused service member as many due process rights as possible. The United States then augments those safeguards by providing lawyers, translators and trial observers to the accused service member without charge.

The Navy will always seek the same procedural rights for U.S. service members facing trial in a foreign country that they are entitled to under the UCMJ and the Constitution. That may not always be possible given the sovereign status of the host nation within its borders. But, we will in all cases demand that U.S. service mem-

bers be afforded an investigation and trial that are open to observation by U.S. representatives and are objectively fair.

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43. Senator SMITH. Secretary England, I'm concerned about an organization affiliated with CINCPAC called the "Asia-Pacific Center for Security Studies"—based in Hawaii. A retired Marine Lieutenant General, Hank Stackpole, who runs this organization, told a conference in Australia that the Bush administration's missile defense program would be destabilizing. Here's the quotation: "I don't believe, in my own personal view, that it is worth the effort to go ahead and create a space war field. . . . What rogue states are going to build ICBM that are easily targeted when you can do, you've heard the old argument, suitcase nuclear device somewhere in downtown New York." First, he's comparing apples and oranges—we have to worry about ICBM and suitcase nukes—but second, I'm concerned about an organization which is affiliated with PACOM that is undermining the president on missile defense. I would recommend that PACOM end its affiliation with this organization.

Would you care to comment?

Secretary ENGLAND. Modeled after the George C. Marshall European Center for Security Studies, the Asia-Pacific Center for Security Studies was established to build on the strong bilateral relationships between the United States Pacific Command and the Armed Forces of the nations in the Asia-Pacific region. The relationship between the Asia-Pacific Center for Security Studies and United States Pacific Command is an issue for the Secretary of Defense.

44. Senator SMITH. Secretary England, when the U.S. accidentally bombed the Chinese Embassy in Belgrade, the U.S. agreed to pay for refurbishment of the Embassy. On April 1, when the Chinese pilot crashed into the Navy EP-3 and forced an emergency landing on Hainan Island, we had to pay for a Russian transport to carry our aircraft back to the States.

Is there any reason why the Navy did not ask the Chinese Government to pay for the damage it did to our aircraft over international waters?

Secretary ENGLAND. The U.S. Government did not request compensation for damage to the U.S. aircraft, nor did it address the issue of damages to the Chinese aircraft involved in the incident as raised by the People's Republic of China. Further questions regarding these matters should be referred to the Office of the Secretary of Defense.

SUBMARINE FORCE LEVEL

45. Senator SMITH. Secretary England, the Director of Undersea Warfare for the Navy volunteered that the submarine force wasn't able to "do some of the national-

level missions that we're asked to do." He commented this spring that submarines have been pulled off those missions to go off and do other work.

Reportedly, strategic intelligence tasking has doubled in the past 10 years, while the number of attack subs in the fleet have declined by 40 percent—what is the solution to this problem?

Secretary ENGLAND. The solution is two-fold. First, we must ensure our submarines are employed efficiently and effectively to carry out as many operational requirements as possible with existing resources. Second, we must preserve and acquire the right number of submarines in order to build up our SSN force structure.

In the area of submarine employment practices, the interdeployment training cycle and maintenance periods have been reduced, deployment duration has been increased to 6 months for all submarine deployments, and our ships and crews are operating at maximum operating tempos. We are also proceeding with plans to homeport three submarines in Guam starting in 2002 to increase their availability for Intelligence, Surveillance, and Reconnaissance (ISR) missions in that theater. The submarine force providers are operating the forces as efficiently as possible. Further reductions in training time or deferrals of maintenance to increase operational time would have a significant negative impact on submarine force material and personnel readiness.

The remaining option, if we are to fulfill all of the current and projected ISR mission requirements for submarines, is to increase force size. Increasing submarine force structure in the near and mid-term can be done by refueling existing SSNs otherwise scheduled for early inactivation and by converting SSBNs to SSGNs to boost the overall force structure and free SSNs to perform more intelligence missions. In the President's Fiscal Year 2002 Budget Proposal, we recommend new funding to begin converting SSBNs and to refuel one of the five SSNs scheduled for inactivation. For the long-term, fixing submarine force structure shortfalls can be done only by increasing the *Virginia* Class SSN build-rate to 2–3 per year as soon as possible.

46. Senator SMITH. Secretary England, if the Navy can't meet U.S. intelligence requirements, what price are we paying in terms of readiness and isn't good intelligence one of the most important missions of all, and one that should never be underfunded?

Secretary ENGLAND. Understanding the price paid in terms of national or military readiness is complicated by the fact that we cannot assess what we don't know—i.e. what we have failed to hear or see due to a lack of submarine presence for intelligence collection. The best that can be done is to address examples, invariably highly classified examples, of situations where the submarine was the only "sensor" that was able to identify and evaluate significant actions or capabilities of a potential adversary—even when all other intelligence collectors identified nothing. In the 1999 Attack Submarine Study, Intelligence Surveillance and Reconnaissance (ISR) missions were assessed by the Geographic CINCs as the highest priority missions for SSNs. In that study, the CINCs assessed the impact of not executing both current and future missions by articulating, at a classified level, detailed consequences of not executing specific missions. Because of submarines' long dwell time and ability to collect intelligence covertly from close-in, the impact of unfilled submarine intelligence missions could include missed intelligence tipplers for the National Command Authority, lost cueing for national sensors, or missed opportunities to observe and evaluate adversaries' tactics and operating patterns. Although intangible by nature, all of these intelligence "gaps" degrade, to varying degrees, our Nation's national security and readiness.

I heartily agree that intelligence requirements should not be underfunded. At the same time, I must guide the Navy within the budget limitations and with careful consideration of the resources required to support all of the Navy's missions and operational requirements.

47. Senator SMITH. Secretary England, the U.S. and Russia signed a new bilateral maritime agreement recently ostensibly to facilitate trade between our Nations—I would like to know whether the Navy was consulted on this agreement? Can you explain why Puget Sound was left off the list of naval facilities that would have required advance notification for Russian merchant vessels? (given we know the Russians use "merchant" vessels for espionage and especially since Puget Sound was the site of the 1997 lasing incident involving the Russian, the *Kapitan Mann*—which caused eye damage to both the American and Canadian pilots).

Secretary ENGLAND. The Navy vetted the proposed bilateral maritime agreement with Russia through the Interagency. In the process, the Navy provided input to the Joint Staff in order to formulate a Department of Defense position for the U.S. nego-

tiating team. Puget Sound was removed from the port security list in 1991. The Navy has continuously expressed concern in the interagency process over that removal.

48. Senator SMITH. Secretary England, General Jones, and Admiral Clark, when we recently met, we discussed a myriad of subjects. During the meeting you mentioned that you have been told that there is an approximate 25 percent excess in the military's infrastructure.

In light of such an estimate and given the President's desire to withdraw from the island of Vieques by 2003, can we justify a continued presence on mainland Puerto Rico?

Can you promise me that you will give serious consideration to closing Fort Buchanan and Naval Station Roosevelt Roads if the primary reason for their existence was to support operations on Vieques?

Secretary ENGLAND. The architecture and structure of Naval Station Roosevelt Roads has been built up over the years to support training in the Puerto Rico operating areas. Without that training, and coupled with our need to effectively use tight resources, the issue of whether the Navy will maintain a presence on mainland Puerto Rico, and to what degree is a question that will require careful examination. We have stated that the Navy will conduct this examination during the course of our resource decision-making.

General JONES. The issue of closing facilities in Puerto Rico is outside my purview as the Commandant of the Marine Corps. While Marine Corps forces utilize the training facilities on Vieques, the Marine Corps does not own or operate any facilities in Puerto Rico. For this reason, the issue of continued facilities presence in Puerto Rico is better directed to the Chief of Naval Operations and the Chief of Staff of the Army and their Service Secretary, all of whom have facilities responsibilities in Puerto Rico in the form of Fort Buchanan and Naval Station Roosevelt Roads. Additionally, the Commander in Chief of Southern Command is a significant tenant at Fort Buchanan and his operations in the Southern Command Area of Responsibility must be taken into account when analyzing future facilities requirements in Puerto Rico.

Admiral CLARK. Bases are part of the overall structure that supports our combat capabilities. This "support of combat capability" is the value-added measurement that must be applied to all our Defense infrastructures. Naval Station Roosevelt Roads supports various missions related to the Atlantic Fleet Weapons Training Facility, including Vieques. Any decisions regarding the value of this base must include an objective review of the contribution to combat capability (in this case training) that the base makes. This method of measuring value, the contribution to "support of combat capability", will be continually applied to our infrastructure, and I will certainly apply this criteria in any future assessments of the need for Naval Station Roosevelt Roads.

The Army will have to address the Fort Buchanan portion of this question. With respect to Naval Station Roosevelt Roads (NSRR), the mission of the base is to support training in the Puerto Rico operating area, to support U.S. Southern Command presence and outreach into South America, and support multi-agency drug interdiction efforts. Should training on the Vieques inner range cease, valuable training may continue to take place in the unencumbered sea and air space of the larger Puerto Rico operating area, in addition to continuation of the U.S. Southern Command and drug interdiction missions. The Navy will conduct an examination to determine the extent of training to be performed in the Puerto Rico operating area and the required Navy presence at Naval Station Roosevelt Roads.

49. Senator SMITH. General Jones, what is the current status of the MPF(E) initiative? What are its funding shortfalls and timeline for completion of the third and final ship?

General JONES. The first MPF(E) ship, the USNS *Harry L. Martin*, is assigned to Maritime Prepositioning Squadron One (MPSRON 1) in the Mediterranean.

Conversion of the USNS *Stockham*, MPF(E) ship two, was recently completed by NASSCO, San Diego, CA. The naming ceremony for the USNS *Stockham* occurred 06 July 01 at Blount Island Command (BIC), Jacksonville, FL. The USNS *Stockham* will complete load out in July 2001 and join MPSRON 2 in Diego Garcia.

We reached a major milestone and averted a work stoppage with our last MPF(E) ship to be fielded, the USNS *Wheat/GTS Basilaya*. The new projected delivery date is late November 2001. Military Sealift Command (MSC) negotiated a contract modification (firm, fixed price vice cost plus contract) with Bender Shipbuilding (Mobile, AL) and additional funding of \$11 million was provided from the National Defense Sealift Fund (NDSF) for the USNS *Wheat/GTS Basilaya* conversion.

ABAYA POLICY

50. Senator SMITH. Secretary Roche, I wrote to Secretary Rumsfeld, along with four of my colleagues, including Senator Collins on this committee, asking for an explanation of the DOD policy which requires female service members to don an abaya—which is standard wear for Muslim women, but is not a Saudi mandate—either for State Department female employees or for tourists. I have yet to receive an answer, but I have had a lot of women and men who have since voiced their outrage over this policy—arguing that it isn't justifiable under any rationale—including force protection. An Air Force officer first went public about this, since her private efforts to reverse this Muslim garb edict were ignored for years—can you look into this and let me know when my letter will be answered substantively?

Secretary ROCHE. As of 20 July, letters relating to this issue were in General Shelton's office awaiting approval. We have assurances from his staff that the letters will be forwarded to the concerned Senators shortly.

ROGUE NUCLEAR THREAT

51. Senator SMITH. Secretary Roche, an article from the *Jerusalem Post* (July 9) claims Iran will have a nuclear bomb by 2005, and that the Iranian Shahab-3 will be capable of reaching any point in Israel. The Iranians are believed to be already in possession of chemical and biological weapons of mass destruction. The arms control lobby says we're exaggerating the threat from "rogue" states—but what about the threat to U.S. forces deployed near rogue states—e.g. in Korea, in Japan, in Guam, in Europe, etc.—and the threat to our close allies, such as Israel? If the Iranians are to become nuclear-capable, how would that transform our debate over missile defenses and the ABM Treaty? Are we going to wait for the surprise results of an Iranian test, as we witnessed with India (to the surprise and dismay of our intelligence community)—and then launch a crash program for deployment of missile defenses?

Secretary ROCHE. No "crash" program is necessary to protect U.S. troops and allies near rogue states that may be developing Weapons of Mass Destruction (WMD). We have a robust capability and are developing additional capability against missile attack. The U.S. has currently fielded the Patriot missile defense system in areas close to rogue states to protect our troops and Allies. Additional Patriot systems are available in the U.S. to field worldwide if a new threat is perceived. We also have the capability to attack suspected sites of WMD launchers by using airpower and special operations units. In addition to these capabilities, the U.S. is developing additional layers of missile defense. Systems such as the Army's THAAD, Navy Theater Wide and the Air Force's Airborne Laser will further strengthen our ability to deal with future threats. All of these systems are designed for use in a theater and have been judged to be compliant with the ABM treaty, which only addresses missile defenses within the U.S.

ACQUISITION REFORM

52. Senator SMITH. Secretary Roche, in his testimony before this committee on January, 11, 2001, the SECDEF pledged to undertake a wholesale reorganization of the acquisition process to reduce the time it takes to field new systems. Secretary Rumsfeld stated, and I quote, "*The U.S. military needs to get on a new path that will permit the rapid introduction of advanced technology that can materially increase military effectiveness and decrease the cost of operating and maintaining those forces*". In previous communications with me you stated that the Air Force is fully committed to the expeditious development, procurement, and implementation of new technologies to "own the night" such as the Integrated Panoramic Night Vision Goggle. As you stated in your letter to me dated January 23, 2001, "*Increasing our warfighters nightfield of view from 40 degrees to 100 degrees adds a combat dimension not present in current night vision devices*".

Do you agree with the SECDEF that we need to fundamentally reform the acquisition process in order to accelerate the development and delivery of key technologies? Can you provide the committee with your plan to accelerate the delivery of the Integrated Panoramic Night Vision Goggle, and how your funding reflects your accelerated efforts.

Secretary ROCHE. Yes, and we are working aggressively to improve our acquisition processes. We are embracing evolutionary and spiral development, experimenting with new ways to quickly fund and deliver promising technologies, and streamlining the requirements-writing process.

Delivering the Integrated Panoramic Night Vision Goggle to the field is not a question of process, but funding. Currently, estimated costs of \$11.3M RDT&E to fund flight test and ejection testing and \$82.7M Procurement across the FYDP are needed to field a baseline quantity of 2,200 units. There is no specific funding for this effort in the Fiscal Year 2002 President's Budget. However the program is currently competing with other Air Force requirements for fiscal year 2002 funding through one of our acquisition reform initiatives, the Warfighter Rapid Acquisition Program Process.

QUESTIONS SUBMITTED BY SENATOR RICK SANTORUM

TRANSFORMATION FUNDING

53. Senator SANTORUM. Secretary White, last year, the Army terminated or restructured seven programs to pay for the Army's Transformation initiative. The Army believed these terminations and restructurings were necessary because the Office of the Secretary of Defense was unable to provide additional funds to support transforming the Army. Congress then restored several of these programs because of existing Army requirements. What assurance can you provide that the Army's Transformation initiative is fully funded in the Fiscal Year 2002 Budget Amendment? If the Transformation effort is not fully funded, what are some of the trade-offs or choices that the Army will have to consider to see that this effort is adequately funded?

Secretary WHITE. The fiscal year 2002 budget generates sustainable momentum for Army Transformation, although not at optimal levels. We invested in Objective Force research, development, testing, and evaluation to set the stage for modernization of equipment; continued fielding the Interim Brigade Combat Teams; and funded modernization of key Legacy Force systems to enhance force capabilities. We made a number of tradeoffs to ensure a well-balanced Army program and will continue to evaluate competing requirements in our efforts to transform.

GRIZZLY

54. Senator SANTORUM. General Shinseki, the Army's Grizzly is a Military Load Class 70 complex obstacle-breaching vehicle that integrates advanced countermine and counter-obstacle capabilities into a single survivable system. The Grizzly incorporates a full-width mine clearing blade, a power driven arm for obstacle reduction and digging and a commander's control station (crew compartment) on a refurbished M1 tank chassis. The Grizzly will be capable of breaching other types of natural and man-made, simple and complex obstacles, creating a lane for vehicles to follow. The Grizzly is designed to provide our maneuver forces with mobility support (i.e., counter-obstacle breaching) for decisive operations.

The fiscal year 2001 Army budget request included decisions to restructure or "divest" a number of programs in order to provide some of the resources to support its Transformation to achieve the ambitious deployment goals outlined in the October 1999 Army Vision. Grizzly was one of the programs that was terminated. Prior to this action being taken, the Grizzly breacher was scheduled to be fielded in 2004.

Last year, the Senate Armed Services Committee authorized \$108 million in funding to restore the program. The committee did so because it believes that critical mobility systems like the Grizzly must be continued to correct critical operational shortfalls for deployed forces. The Senate Appropriations Committee provided only \$15 million in research and development funding for fiscal year 2001. In the end, only \$15 million in funding was provided for Grizzly.

If the Grizzly breacher is not fielded, the Army will have to rely on the M728 Combat Engineer Vehicle (CEV), an armored vehicle which consists of a basic M60A1 tank with a hydraulically operated debris blade, a 165mm turret-mounted demolition gun, a retractable boom, and a winch. The CEV was placed in service in 1965 with a total of 291 vehicles. During Operation Desert Storm the CEV proved unable to maneuver with the heavy force due to the inability of the M60 chassis and power train to keep pace with the M1A1.

What is the level of support requested for fiscal year 2002 for the Grizzly breacher? If the Grizzly breacher is not fielded, how does the Army intend to meet its requirements for decisive operations? What are the costs associated with sustaining the CEV?

General SHINSEKI. The Grizzly program is not funded in the Fiscal Year 2002 President's Budget.

For the Legacy and Interim Forces, the Army will continue using the current deliberate breaching tactics of sequentially orchestrating multiple systems with sol-

diers on the ground to affect a breach in support of mounted operations. Deliberate breaching operations are resource and time intensive. Current systems used in support of breaching operations include the Armored Combat Earthmover for breaching craters and ditches, the Armored Vehicle Launched Bridge for breaching ditches, the Armored Battalion Countermine Set used to proof lanes in minefields, the Mine Clearing Line Charge used to breach minefields, the bangalore torpedo used to clear mines, and dismounted soldiers employed to reduce wire obstacles and to reduce other obstacles with explosives. For the Objective Force, Future Combat System concepts are under development. These will ensure we meet our requirements for decisive operations.

There are no sustainment costs for the CEV, the vehicle was retired from service in 1998. However, 14 vehicles remain in the inventory. Four of these vehicles were converted into special purpose, remotely controlled, mine clearing vehicles in the Balkans. The remaining 10 vehicles are located at Anniston Army Depot and are cannibalized for spare parts to support the four operational mine clearing vehicles.

We do not have fiscal year 2001 cost data for these vehicles. However, historical fiscal year 2000 data show sustainment costs at \$533,948. This cost was based on a total operational tempo of 560 miles for the four operating mine clearing vehicles.

55. Senator SANTORUM. Secretary England, the T-6A Joint Primary Aircraft Training System (JPATS) turboprop is designed as a dedicated training aircraft possessing jet-like handling characteristics. Replacing the Air Force's T-37 and the Navy's T-34C aircraft, the T-6A will offer better performance and significant improvements in training effectiveness, safety, cockpit accommodations and operational capabilities. Powered by a PT6A-68 turboprop engine with a four-blade propeller, it features a stepped-tandem, cockpit configuration, with the instructor's rear seat raised slightly to improve visibility from the rear cockpit; modern avionics; and improved egress systems.

Briefing materials provided by the Navy note that the Service had originally intended to purchase 24 JPATS aircraft. Last year, the Navy purchased 24 trainers to continue modernizing its inventory of training aircraft. However, this year it appears that the Navy has not requested funds to purchase any JPATS aircraft in fiscal year 2002.

Please explain this decision and please note the impact on the industrial base, which ramped up from producing 12 JPATS for fiscal year 2000 to 24 JPATS for fiscal year 2001. That is, what will be impact on the JPATS producer if no additional aircraft are purchased in fiscal year 2002? How is the Navy planning to fill the 24-aircraft gap?

Secretary ENGLAND. The T-34C is a safe and reliable aircraft and has sufficient service life remaining to satisfy Navy requirements for several more years. The Navy conducted a prioritized review of Navy programs including the Joint Primary Aircraft Training System (JPATS) procurement profiles. In this review all options were investigated, including maintaining the T-34C in service longer than previously envisioned. JPATS procurement was deferred to fund more urgent competing priorities and take better advantage of the service life remaining on the T-34C.

Previously, the procurement profile would have resulted in a production rate in excess of economic order quantity. While this was a boon to industry in the short run, the end of the Air Force buy in fiscal year 2007 would have resulted in a Navy buy (of 24) far below minimum sustaining rate and at a premium cost to the Navy. By deferring the Navy buy to post Air Force procurement, we optimize the remaining life on the T-34C and allow the Navy to commence procurement at an economic order quantity in the future. This would provide industry with long-term steady state production and minimize the near-term fiscal year 2002 quantity reduction impact.

QUESTIONS SUBMITTED BY SENATOR PAT ROBERTS

56. Senator ROBERTS. General Jones, your statement refers to the differences between the terms transformation and modernization. Please explain for the committee the basic differences between these two terms as they relate to the Marine Corps.

General JONES. Unlike the other services that have undergone a major restructuring in response to the changing strategic and operational landscapes of the post Cold War world, the Marine Corps has been assigned a role and organized, trained, and equipped as an expeditionary force in readiness that is as relevant today as it was in 1952 when Congress established in law the role of the Marine Corps. The Marine Corps has neither had to downsize nor reshape itself as a result of the Cold

War. Instead, the Marine Corps has continued to follow a plan for developing additional capabilities needed to hone its ability to conduct its assigned role against the changing threat in the 21st century.

Absent a change of role as a result of the end of the Cold War, the Marine Corps has sought to modernize its forces through selective acquisition of new equipment that takes advantage of emerging technologies such as precision weapons, information technology, new engines, stealth technology, etc. In some cases, such as the Light Weight 155mm Howitzer, the intent is to replace existing equipment that is past its service life. In other cases—such as the MV-22 and AAV—the ideas for the technologies were developed during the 1980s to enable new operational concepts while the technologies to build the equipment have not been sufficiently developed until 20 years later. In this sense, modernization through the addition of new equipment that will provide a major increase in the depth and speed that the Marine Corps can carry out its assigned role as an inherently naval expeditionary force will result in potentially revolutionary increased capabilities but without a major restructuring and transformational change in the operating forces of the Marine Corps.

Accordingly, modernization as used by the Marine Corps explicitly means reshaping the Marine Corps capabilities to meet the future through the selective acquisition of new equipment that will enable the execution of Expeditionary Maneuver Warfare in support of emerging joint warfighting concepts. Modernization does lead to quantum increases in capability; however, because it is part of an on-going process of Marine Corps combat development there is no requirement for a major shift in the way the Service trains, organizes, and equips Marine Corps operating forces that is implicit in the term transformation.

To the Marine Corps, transformation is a continuing process that spans decades of innovation and experimentation with the implementation of new systems, operational and organizational concepts. It involves the development of new operational concepts, refinement of enabling capabilities through experimentation, and the development of new organizations, tactics, techniques, procedures and technologies as necessary to turn these concepts into warfighting capabilities.

57. Senator ROBERTS. General Jones, your statement highlights concerns you have regarding the 2001 congressionally-mandated PERSTEMPO program. Could you please comment on some of your concerns and recommended solutions?

General JONES. The Marine Corps understands the intent of the PERSTEMPO legislation, is fully complying by actively tracking and managing the PERSTEMPO of our marines, and will report to Congress as required. However, we have several concerns: The high-deployment per diem payment equates to paying premiums for doing what we do as normal operations and deployments in support of the nation. PERSTEMPO requirements put our commanders on the horns of a dilemma by causing them to make decisions they wouldn't ordinarily make: Use scarce Operations and Maintenance funds to pay per diem, or; break the continuity and cohesion of units to avoid putting some marines over the 400 day threshold, or; reduce the amount of necessary re-deployment training so that individuals will not break the 400-day threshold during the deployment. We ask that Congress recognize that the PERSTEMPO legislation is a new requirement and the full impact is not known at this time. We need time to fully assess the impact and possible unintended adverse consequences and implement any necessary corrective actions. The Marine Corps recommends delaying the requirement to begin paying the high-deployment per diem payments, for those exceeding the 400 day threshold, until 1 October 2003. This delay allows the Services the time to use the tools we have devised to manage PERSTEMPO before we are required to start the payments. Using our tools, we will be able to reduce PERSTEMPO to the least possible amount and have time to budget for the PERSTEMPO per diem that we must pay.

58. Senator ROBERTS. General Jones, your statement highlights the Marine Corps' efforts to move beyond traditional amphibious assault to advanced expeditionary operations from land and from sea. Please explain what expeditionary means as applied to the Marine Corps.

General JONES. To the Marine Corps, expeditionary implies an ethos and state of mind. It defines both a constant state of readiness for deployment as well as a required preparation to adapt to a wide range of missions and warfighting conditions. As a naval service, the Marine Corps is specifically tailored to serve as part of a seabased operation. However, the same qualities that make it readily adaptable to a variety of seabased missions make it a force of choice for a number of expeditionary missions that are not necessarily seabased in nature.

The Marine Corps is expeditionary by culture and transformational by design. Its organizational paradigm has been proven fundamentally sound and relevant, providing templates to forge innovation for the future. Each Marine Air-Ground Task Force (MAGTF) is an integrated combined-arms team, modular and scalable to meet the unique requirements of the specific mission, including leading or enabling joint and coalition operations. The objective is to develop the capability to use the sea both as maneuver space and sanctuary for reach back to integrated long-range precision fires, network centric command and control, adaptive integrated seabased logistic support, and assembly of follow-on forces.

At the same time, the Marine Corps is capable of expeditionary operations that are not seabased. Historically, marines have been a force of choice for a variety of expeditionary missions that have not been seabased such as sustained support of the United Nations efforts in Somalia, and aviation support of joint operations over Bosnia and Kosovo from an expeditionary airbase at Aviano, Italy. During Desert Storm, marine expeditionary forces were among the first on the ground in Saudi Arabia through maritime prepositioning in support of an expeditionary operation that was hosted by a friendly nation rather than conducted from a seabase.

As the Marine Corps modernizes with the addition of the AAV and MV-22 it will have certain inherent capabilities for power projection that will enable even greater reach for Marine Corps operating forces operating either from the seabase or from intermediate staging bases ashore. This expanded reach will permit forcible entry operations over a much greater range of shoreline making it less predictable and vulnerable than traditional amphibious assaults against established defenses. At the same time, the addition of the MV-22 will provide an extraordinary extension in the range that marine expeditionary forces will be able to be projected from either sea or land bases in order to pursue the range of humanitarian and crisis response missions that U.S. military forces are required to conduct in addition to more traditional forcible entry operations.

59. Senator ROBERTS. General Jones, how does the Marine Corps define its amphibious lift requirement? To what extent is this requirement being met today? Is this requirement being re-examined as part of the ongoing defense review?

General JONES. The naval warfighting requirement, the capability the Marine Corps strives to provide to our Nation, remains at 3.0 Marine Expeditionary Brigade Assault Echelons. The long standing requirement for an amphibious force structure plan that supports lift for 3.0 Marine Expeditionary Brigade Assault Echelons, as stated in the Department of the Navy's 1990 Integrated Amphibious Operations and USMC Air Support Requirements Study, the 1992 Mobility Requirements Study, and reemphasized in congressional testimony and the Secretary of Defense's 26 June 2000 Report On Naval Vessel Force Structure Requirements, remains a priority requirement.

To determine amphibious ship requirements in this context, a Marine Expeditionary Brigade is measured by the five fingerprints of lift consisting of troops, square feet for vehicles, cubic feet for cargo, vertical take off and landing spots, and landing craft air cushioned spots. Today's active amphibious fleet is capable of lifting the following Marine Expeditionary Brigade Assault Echelon equivalents: Troops—2.72; Vehicle square feet—2.1; Cargo cubic feet—3.71; Vertical Take Off and Landing spots—3.25; and Landing Craft Air Cushioned spots—3.5. Shortfalls in active amphibious ships remain an area of concern.

Naval amphibious ships combined with embarked marines provide forward presence and flexible crisis response forces for employment in support of foreign policy objectives. These forces provide the most formidable amphibious forcible entry capability in the world. Amphibious lift requirements are formulated to support the National military strategy, satisfy combat surge requirements, and can also be tailored to meet real world day-to-day commitments. Although this particular requirement is not being examined as part of the ongoing Quadrennial Defense Review, the Marine Corps, expeditionary by nature and transformational by design, continuously reexamines requirements to ensure validity.

QUESTIONS SUBMITTED BY SENATOR WAYNE ALLARD

OUT-OF-POCKET EXPENSES

60. Senator ALLARD. Secretary Roche, Secretary White, and General Shinseki, I have long been concerned on the high out of pocket expenses of military personnel living off post in the Colorado Springs area and now outside of Buckley Air Force Base. The reduction of out of pocket expenses for military personnel living offpost

is long over due. Can you comment on your efforts to meet the goal of reducing or eliminating these costs and increasing the availability of housing on these installations?

Secretary ROCHE. In 2000, the Secretary of Defense directed that BAH would pay for 100 percent of the median out-of-pocket expenses by 2005. BAH is being transitioned over the next few years to avoid any sizable changes to allowances. 2000 BAH rates were set at 18.9 percent out-of-pocket, 2001 is 15 percent, 2002 will be 11.3 percent, 2003—7.5 percent, 2004—3.5 percent, and 2005—0 percent.

The Air Force, along with DOD, is on track to meet the milestones of this reduction plan to decrease out-of-pocket expense. However, these improvements generate large DOD bills: \$486 million for fiscal year 2002, \$614 million for fiscal year 2003, \$635 million for fiscal year 2004, and \$718 million for fiscal year 2005. Continued congressional support is needed to pay for housing allowance reform and process improvements.

Our Family Housing Master Plan (FHMP) identifies locations where there is not a sufficient supply of affordable and adequate units in the local community. The FHMP identifies a future requirement to construct 80 additional units at Peterson AFB in Colorado Springs and 201 units for Buckley AFB in Denver. Consistent with this plan, our fiscal year 2002 program includes a privatization project to construct 201 units for Buckley AFB.

Secretary WHITE and General SHINSEKI. The Army has been on a campaign to reduce out-of-pocket expenses. We have concentrated our efforts on the largest areas where out-of-pocket expenses occur: basic pay, housing, medical care, and permanent change of station (PCS) moves. With the help of Congress, we have been able to obtain pay raises at a rate higher than the National employment cost index through 2006.

The Secretary of Defense established a goal to eliminate out-of-pocket housing expenses by fiscal year 2005 through increases to the basic allowance for housing. This initiative should increase off-post housing available to soldiers in the local community. At Fort Carson, the housing privatization contractor is constructing an additional 840 housing units on post to meet the housing needs of soldiers assigned there.

The Army has achieved substantial improvements to health care that our soldiers and their families receive. TRICARE Remote, elimination and reduction of co-pays, and reduction of pharmacy costs will help eliminate soldier out-of-pocket expenditures. Healthcare improvement is an ongoing process, and we will continue to adjust to meet the needs of an ever-changing world.

A multi-service working group is reviewing ways to reduce out-of-pocket expenses related to PCS moves. The working group is reviewing ways to streamline the moving process, introduce cost efficiencies, and improve entitlements for service members during and after their move.

FORCE STRUCTURE

61. Senator ALLARD. General Ryan and General Shinseki, we often hear reports that the PERSTEMPO and the OPTEMPO are high and that the services are having difficulty maintaining them with the current force structure. An increased reliance on the Reserve components has had a positive effect, but they too are suffering from a high OPTEMPO. At the readiness hearing last September, the service chiefs implied that the Quadrennial Defense Review would likely return a recommendation to increase the size of our force structure, particularly in the Army. Yet in the fiscal year 2002 budget, all services maintain the same number of troops. How are you going to reduce the negative effects of a high PERSTEMPO and OPTEMPO now and in future years?

General RYAN. The Expeditionary Aerospace Force (EAF) construct addresses high PERSTEMPO and OPTEMPO by spreading deployment requirements over a larger Total Force pool and making deployments more predictable for our airmen and their families. Ten Aerospace Expeditionary Forces (AEFs) and two Aerospace Expeditionary Wings (AEWs) represent the core of the EAF's deployable combat power and forward presence capability. Employing a rotational cycle allows us to manage the force better by making more Air Force people available for deployments and determining when, where, and how to focus contingency OPTEMPO relief. We are also reviewing and "rightsizing" the number and type of airmen we deploy in support of contingency deployments. The AEF schedule further helps us identify shortfalls in the current force and make appropriate changes to our investment strategies. We are exploring options to reduce the tempo for Low Density/High Demand (LD/HD)

assets, standoff precision weapons capability, and Suppression of Enemy Air Defense (SEAD) capabilities, but the bottom line is there are no quick fixes.

We have also taken steps to ensure we have sufficient personnel to support future OPTEMPO and PERSTEMPO demands by addressing our total end-strength. The Air Force's programmed-end strength was reduced from 357,000 in fiscal year 2001 to 352,200 in fiscal year 2002. We are no longer attempting to achieve this reduced end strength and have added back 6,600 billets in pursuit of a new fiscal year 2002 programmed end strength of 358,800. In addition to adequate manpower, we continue to focus on other quality of life issues which address the effects of PERSTEMPO by providing improved family support, better working conditions, and improved compensation.

General SHINSEKI. Please allow me this opportunity to define the terms PERSTEMPO, OPTEMPO, and deployment tempo or DEPTTEMPO. OPTEMPO is the annual operating miles or hours for major equipment or systems in battalion-level or equivalent organizations. PERSTEMPO is the number of days an individual soldier is engaged in official duties at a location or under circumstances that make it infeasible to spend off-duty time in his or her normal residence. DEPTTEMPO is the average number of days spent away from barracks or quarters for training or operational deployments. DEPTTEMPO is measured as the number of days a unit would have to deploy as a whole.

That said, I can best answer your question from a DEPTTEMPO perspective. The Army has studied DEPTTEMPO and associated readiness issues and implemented several initiatives to improve the readiness of the force, mitigate the impacts of deployments, and improve the well being of our soldiers and their families.

The Army manning initiative has significantly improved the personnel readiness of our combat divisions. We have manned these units to 100 percent of their authorized personnel to ensure they have the resources to execute and sustain the full range of missions they might be assigned. Fully manning the divisions has reduced personnel turbulence and increased unit readiness.

We have implemented a corps alignment policy that tasks one corps at a time to support both Bosnia and Kosovo? allowing the other corps to focus on collective training requirements and quality of life. We believe this policy can provide additional leader focus and predictability to both deploying and non-deploying units.

The Army has increased the use of our Reserve component for overseas deployments to distribute mission load, mitigate active force shortfalls, and reduce active component DEPTTEMPO. At the same time, our Reserve component soldiers have developed valuable mission experience. We have studied the frequency, deployment, and recovery for our Reserve components. We are adapting our model for mobilization, training, and deployment for contingency operations to reduce the impact on soldiers, families, and employers.

The Army has implemented a deployment policy that limits operational employment to 179 days. Where appropriate, based on specific mission requirements, we have reduced deployment lengths to as low as 120 and even 90 days. We are implementing PERSTEMPO legislation directed by the National Defense Authorization Act of Fiscal Years 2000 and 2001 that requires general officer involvement in decisions to deploy soldiers for greater than 182 days over a moving 365-day window. Additionally, the Army also implemented a PERSTEMPO tracking and management system and a stabilization policy that prevents soldiers from back to back deployments. The Army also designs and announces deployment schedules to ensure deployments are spread throughout the force and to offer a greater degree of predictability of deployments. We continue to study ways to reduce soldier time away from home.

DEPARTURE AREA CONTROL GROUP OPERATIONS AT PETERSON AIR FORCE BASE

62. Senator ALLARD. General Shinseki, in your written statement, you state the budget meets the Army's strategic mobility goal of fiscal year 2003. Does this include the Army's requirement for a building at Peterson Air Force Base to support the Departure Area Control Group operations? It is my understanding that building has been slipped to fiscal year 2004. Please explain.

General SHINSEKI. The budget does not include the building at Peterson Air Force Base to support the Departure Area Control Group operations. During the fiscal year 2002 program review and subsequent discussions, U.S. Army Forces Command requested that funds programmed for the Departure Area Control Group building be reprioritized and reallocated to support the Sabre Hall project at Fort Stewart. The funds were subsequently reallocated with the understanding that since there is no funding for the Army Strategic Mobility Program in fiscal year 2004, the De-

parture Area Control Group building would compete within the Army's normal installation infrastructure program, until such time as funding becomes available. The project may also be considered in a planned follow-on program to the Army Strategic Mobility Program in support of Army Transformation, which will be the Army Power Projection Program.

QUESTIONS SUBMITTED BY SENATOR SUSAN COLLINS

63. Senator COLLINS. General Jones, you recently testified to the Senate Appropriations Subcommittee on Defense that "the future of naval precision fires is represented by the Zumwalt class DD-21 Land-Attack Destroyer and the development of an Extended Range Guided Munition." Further, General Nyland testified before our Seapower Subcommittee that the Marine Corps, at present, lacks organic fire support capabilities. General Nyland highlighted the need and requirement for the Advanced Gun System currently scheduled to deploy on DD-21, which would help to address this sustained fire support shortfall. He went on to state that, "I am confident that the top-down strategy review will reveal, given the state of the world and the potential for future conflict, that DD-21s validity and value will be certain to be characterized as a necessity and a relevant element of the future security." Taken together, these planned enhancements will dramatically improve the range, responsiveness, accuracy, and lethality of the Naval Surface Fire Support provided to forces ashore. General Jones, would you agree that the attributes and technologies, such as the Advanced Gun System, Extended Range Guided Munitions, and Land Attack Standard Missile, currently scheduled to deploy on DD-21 will make significant strides in addressing this critical fires support shortfall?

How key is the DD-21 program to transforming our naval surface fires capabilities?

General JONES. The attributes and technologies being developed for DD-21 are vital for meeting the Marine Corps' Naval Surface Fire Support (NSFS) requirements. The Navy has recognized the current deficiency in NSFS and has embarked upon a two-phased program to eventually satisfy the requirements of the Marine Corps.

Near-term programs such as the 5"/62 gun, Extended Range Guided Munition and Land Attack Standard Missile will provide an enhanced NSFS capability, but will not meet all of the range and lethality requirements for supporting the Marine Air Ground Task Force in future expeditionary operations. These systems will enhance the fires support capability of the Navy in the near-term, but will also provide a means by which to leverage technological development to reduce the developmental costs of far-term. Specifically, the technological developments supporting the 5-inch Extended Range Guided Munition program will directly benefit the 155mm Long Range Land Attack Projectile under development for the Advanced Gun System for DD-21.

In the far-term, the 155mm Advanced Gun System, with a family of precision-guided and ballistic ammunition, and the Advanced Land Attack Missile, with a family of general use and specialty warheads, will fully meet these requirements. The capabilities provided by the DD-21 and its associated systems remain vital to realizing the full potential of Expeditionary Maneuver Warfare and the conduct of expeditionary operations and sustained operations ashore in a fluid, non-linear battlespace.

OBJECTIVE CREW SERVED WEAPON

64. Senator COLLINS. Secretary White and General Shinseki, the Objective Crew Served Weapon (OCSW) is a perfect example of leap-ahead technology to support Army Transformation. The advanced materials from which it is made, and the increased lethality and survivability that come from this weapon should push it to the forefront of Transformation, yet it has taken a back seat to other work. As Secretary, can we expect you to press forward on this weapon system and ensure that our fighting men and women have the best possible equipment? General Shinseki, would you care to add any comments on this program?

Secretary WHITE. I agree that the OCSW has great potential to provide our soldiers with a lighter, more lethal weapon system that has leap-ahead characteristics. Rather than saying that this program has taken a back seat, I would say that more work needs to be done before the Army can commit to full development and fielding. The Army has applied lessons learned from the Objective Individual Combat System. Among those lessons are ensuring that the system is sufficiently mature before transferring it from the science and technology base to a program manager and ad-

addressing important issues, such as affordability, reliability, and manufacturability. Once these issues have been resolved, the Army will have confidence that OCSW is ready for transition to system development and demonstration and follow-on procurement. The Army shares your desire to get OCSW in soldiers' hands as soon as possible.

General SHINSEKI. I agree with Secretary White that OSCW, when successfully developed and fielded, will provide leap-ahead capabilities. I would add that OCSW will greatly enhance the lethality and survivability of dismounted warriors. It also has potential as an armament for vehicles. OCSW's ability to engage targets in defilade at extended range offers the Army warfighting capabilities that we need.

65. Senator COLLINS. Secretary England, we have discussed the P-3 aircraft as an integral part of our current war plans, patrol and reconnaissance programs before, and the fact that the average age of the P-3 platform is roughly 25 years old. While aircraft avionics upgrades have kept the plane relevant and viable in today's threat environment, the airframe itself is reaching the end of its useful service life. I am aware that an ongoing service life assessment program is studying this airframe fatigue life issue and that there is an ongoing Analysis of Alternatives underway to look at the Multi-Mission Aircraft as a follow-on to the P-3 program.

What will the fiscal year 2002 budget amendment allow us to do to further extend the life of our current P-3 aircraft and/or further identify a follow-on program to meet this critical patrol and reconnaissance Navy mission?

Secretary ENGLAND. The fiscal year 2002 amended budget contains \$53.8 million of Research, Development, Testing, and Evaluation funding to conduct the next phase of the planned acquisition (Component Advanced Development) for the P-3 replacement aircraft. Contracts will be signed with one or more contractors to further refine concepts proposed late in 2000. The Navy plans to continue work on analyses supporting development of acquisition documentation, performance specifications, and acquisition planning required by current directives and law.

66. Senator COLLINS. Secretary England, do you agree that the Department needs to actively pursue and apply resources in the near-term to ensure that we can continue the P-3 reconnaissance operations without impacting readiness, as these aging aircraft reach the end of their useful service life?

Secretary ENGLAND. The Navy agrees that the capability provided by P-3 aircraft is a core capability it intends to leverage in the future. The Navy is actively pursuing alternative funding options that minimize impact on readiness within budgetary constraints.

[Whereupon, at 12:54 p.m., the committee adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2002

THURSDAY, JULY 12, 2001

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

BALLISTIC MISSILE DEFENSE POLICIES AND PROGRAMS

The committee met, pursuant to notice, at 9:35 a.m. in room SH-216, Hart Senate Office Building, Senator Carl Levin (chairman) presiding.

Committee members present: Senators Levin, Lieberman, Cleland, Landrieu, Reed, Akaka, Ben Nelson, Carnahan, Dayton, Warner, Smith, Inhofe, Allard, Sessions, and Bunning.

Committee staff members present: David S. Lyles, staff director; Madelyn R. Creedon, counsel; and Peter K. Levine, general counsel.

Majority staff members present: Kenneth M. Crosswait, Richard W. Fieldhouse, and Terence P. Szuplat, professional staff members.

Minority staff members present: Romie L. Brownlee, Republican staff director; Judith A. Ansley, deputy staff director for the minority; L. David Cherington and Scott W. Stucky, minority counsels; Brian R. Green and Mary Alice A. Hayward, professional staff members.

Staff assistants present: Jennifer Key, Thomas C. Moore, and Jennifer L. Naccari.

Committee members' assistants present: Menda S. Fife, assistant to Senator Kennedy; Frederick M. Downey, assistant to Senator Lieberman; Andrew Vanlandingham, assistant to Senator Cleland; Elizabeth King, assistant to Senator Reed; Davelyn Noelani Kalipi, assistant to Senator Akaka; Peter A. Contostavlos and William K. Sutey, assistants to Senator Bill Nelson; Eric Pierce, assistant to Senator Ben Nelson; Brady King, assistant to Senator Dayton; Wayne Glass, assistant to Senator Bingaman; Margaret Hemenway, assistant to Senator Smith; John A. Bonsell, assistant to Senator Inhofe; George M. Bernier III, assistant to Senator Santorum; Robert Alan McCurry, assistant to Senator Roberts; Douglas Flanders, assistant to Senator Allard; James P. Dohoney, Jr., assistant to Senator Hutchinson; Arch Galloway II, assistant to Senator Sessions; Kristine Fauser, assistant to Senator Collins; and Derek Maurer, assistant to Senator Bunning.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Chairman LEVIN. Good morning everybody. The committee meets this morning to receive testimony on ballistic missile defense policies and programs in the proposed fiscal year 2002 amended budget from Deputy Secretary of Defense Paul Wolfowitz and the Director of the Ballistic Missile Defense Organization, Lt. Gen. Ron Kadish. I welcome you both to the committee this morning.

We are 2 days away from the first attempted intercept test in over a year of a missile defense system intended to address the possibility of a limited long-range missile attack from a nation such as North Korea, Iran, or Iraq. All of us hope that Saturday's test will be successful. However, the future of a research program will not hinge on the success or failure of any one test. Learning whether or not a system can be developed and understanding the true costs will take many tests over many years. But there is a more fundamental uncertainty than the outcome of Saturday's test or future tests. Would a National Missile Defense system that is unilaterally deployed conflict with a treaty to produce a destabilizing response from other countries and increase the threat of proliferation of weapons of mass destruction? Further, would that response increase the possibility that the unimaginable horrors of a nuclear attack would be reigned upon us as a result of breaching the treaty? Would such a system make the United States, in other words, more secure or less secure? Is it worth risking those reactions to a unilateral deployment, particularly given the fact that we're told by the intelligence community that a ballistic missile is the least likely means of delivering a weapon of mass destruction and that a truck, a ship, or a suitcase would be more reliable, less costly, and have no return address? These fundamental policy questions will be the focus of later hearings.

Today we will try to understand the budget request for missile defense programs that the administration has presented for fiscal year 2002. The administration is proposing a large increase for missile defense—a \$3 billion or 57 percent increase over the current fiscal year—while proposing to decrease investments in other critical areas of the defense budget, such as procurement, science and technology, and even some readiness areas. Secretary Rumsfeld told the committee 2 weeks ago that the “taxpayers have a right to demand that we spend their money wisely.” Well, a 57 percent increase is a huge amount for any program to absorb and spend wisely and efficiently in a single year. The administration proposes to spend \$8 billion on missile defense in fiscal year 2002 but the Pentagon has not provided Congress the details of how it intends to spend that \$8 billion. General Kadish briefed the committee 3 weeks ago on his recommendations to the Secretary of Defense. Two weeks ago Secretary Rumsfeld told us that the actual details of the R&D budget for missile defense are still in a state of flux. The administration's plans for missile defense for fiscal year 2002 have been harder to zero in on than a target in a missile defense test.

The purpose of today's hearing is to attempt to get specific details on activities proposed in this budget request and clear answers to critical questions. Among the questions is whether any proposed activities in the administration's fiscal year 2002 budget

request for missile defense would be in conflict with the Anti-ballistic Missile (ABM) Treaty. General Kadish addressed this very question in a briefing to the committee 3 weeks ago. He said that if all of his recommendations for missile defense were implemented, there would be no conflict with the ABM Treaty in fiscal year 2002. We have put the question of possible violations of the treaty in fiscal year 2002 to Secretary Rumsfeld twice in recent hearings. Secretary Rumsfeld first told the committee 3 weeks ago that "I don't think the 2002 budget is a problem in that regard." He then told the committee 2 weeks ago that "we don't know for sure." On July 2, I sent a letter to Secretary Rumsfeld asking the following question: "Are their any activities proposed to be carried out with the funding you are requesting for missile defense in fiscal year 2002 that would not be in compliance with the ABM Treaty and, if carried out, either would cause a violation of the treaty or would cause the United States to give notice under the provisions of the treaty that we would withdraw from the treaty?" I've yet to receive an answer to my July 2 letter.

This morning the press reports that the administration has informed our allies that our missile defense research and development activities will conflict with the ABM Treaty in a matter of months, not years. That is exactly the question that I've been asking the administration for weeks without getting an answer. If press reports are true, Congress will need to decide within months whether to fund research and development activities that conflict with the ABM Treaty. The consequences of such funding and the responsibility that goes with it are serious. Secretary Wolfowitz will, I am sure, tell us if the reports in the papers are true and that we have informed our allies and Russia that "these tests will come into conflict with the ABM Treaty in months, not years."

The President alone has the right to withdraw from a treaty, but Congress has the heavy responsibility of determining whether or not to appropriate the funds for activities that conflict with a treaty. Knowing the consequences of the budget actions requested of us is essential, not just for those who are concerned about whether a treaty violation would leave America less secure. It is also essential for those who are concerned about the huge 1-year increase in funding for missile defense given other pressing defense needs.

Senator Warner.

STATEMENT OF SENATOR JOHN WARNER

Senator WARNER. Thank you, Mr. Chairman. Mr. Chairman, I examined the article this morning. I think the only detail that I could determine was in the *Washington Post* and the Secretary I think has verified it, that emanated from briefings on Capitol Hill yesterday and it's sort of a gathering of fragmentary reports that there is not a single press release in place. So, I hope we give our witnesses this morning, whom I welcome with you, the benefit of the doubt and we should hopefully receive the testimony today. I've reviewed Secretary Wolfowitz's statement, the complete and accurate statement by the administration that was made yesterday. But you and I have been engaged here some 23 years in this committee, in all types of reviews, of this issue of missile defense and it's been a long and arduous uphill climb. In that period of time,

we have now reached, I think, clarity that all agree on here in the United States as well as abroad. There is a threat.

It is absolutely the duty of any president of the United States to step up and prepare our Nation to defend itself against this threat. That's precisely what President Bush is doing in my judgment. I think that we should as a Congress give him the opportunity to, in a statesman-like manner, prepare to lead this Nation and hopefully our allies in a course of action to defend this country against what we clearly see now are actual threats.

Secretary Wolfowitz in his opening statement refers to the attack in the Gulf War where we, the United States, sustained the largest number of casualties as a consequence of a SCUD attack during that conflict. I, together with Senators Inouye, Stevens, and Nunn, were in Tel Aviv one night during the war when a SCUD hit Tel Aviv. The following day we went out and saw the devastating damage inflicted upon the nation of Israel. Although we had our PAC system in there at the time, and I think that system was effective to a degree, it was defenseless and we as a Nation are just as defenseless 10 years after those attacks. Now, the PAC-3 has been upgraded, but there's still a growing threat. We accept that and so now I think the President has properly outlined what he intends to do. He did that initially on May 1, 2001 and I quote him: "Today the sun comes up on a vastly different world. The wall is gone and so is the Soviet Union. Today's Russia is not our enemy. Yet this is still a dangerous world—a less certain, a less predictable one."

More nations have nuclear weapons and still more have nuclear aspirations. Many have chemical and biological weapons. Some already have developed a ballistic missile technology that would allow them to deliver weapons of mass destruction at long distances. We need new concepts of deterrence to rely on both offensive and defensive forces. We need a new framework that allows us to build missile defenses to counter the different threats of today's world. That is simply a responsible statement by the Commander in Chief of our Armed Forces as he is so designated under our Constitution. He is the chief architect, not Congress, of foreign policy. Quite true, we have the power of the purse. But I plead with my colleagues, let us form a partnership with the President to move forward. Let us recognize that he has the constitutional responsibility to lead and see where and how we can best support him.

I think it's far too early to get tangled up in the small details of the lawyers trying to determine whether this does or does not comply with the ABM Treaty. As far as I know, the President has made good faith efforts in consultation with our allies. He has had preliminary discussions with Russia. This system which defends us against only perhaps as many as a dozen missiles is not a threat to the awesome—and I repeat, awesome—inventory of missiles that Russia has today in an operational status. I'm confident that if we, Congress, show our support to our President, he will eventually be able to work through the consultative process and eventually the negotiating process with Russia such that a hopeful new framework can be reached to replace the aging 1972 ABM Treaty and that we can go forward in such a way as to look at a far broader spectrum of technical options to defend this country and, in all

probability share to some extent that technology with our allies and possibly with Russia. Russia should recognize that it is also threatened and threatened by systems in existence today with shorter ranges whereas our principal threat here at home are from the longer range missiles. I believe our President will succeed and I just hope that Congress will act as a full partner and be supportive to let him take the initiatives as the Constitution clearly empowers him, and we hopefully will give him that support so that he can be successful.

Now, I will just put the balance of my statement in the record. [The prepared statement by Senator Warner follows:]

PREPARED STATEMENT BY SENATOR JOHN WARNER

Thank you, Senator Levin. I join you in welcoming our witnesses today. Secretary Wolfowitz and General Kadish, welcome, and I look forward with interest to hearing your testimony.

The effort to develop and deploy missile defenses that will protect our Nation, our soldiers, sailors, airmen, and marines deployed overseas, and our allies and friends has been a long and arduous one. There have been many setbacks and many interruptions along the way. This year, that effort may hang in the balance.

President Bush has proposed a bold new approach—to depart from the past and to restructure the strategic environment. “We need a new framework,” the President said on May 1 on this year, “that allows us to build missile defenses to counter the different threats of today’s world. To do so, we must move beyond the constraints of the 30-year-old ABM Treaty. This treaty does not recognize the present, or point us to the future. It enshrines the past. No treaty that prevents us from addressing today’s threats, that prohibits us from pursuing promising technology to defend ourselves, our friends and our allies is in our interests or in the interests of world peace.”

I agree with every word of that. I remain firm in my conviction that the deployment of effective missile defenses as soon as technologically possible is critical to the security of this nation. We have no higher responsibility than to protect our Nation, our troops, and our allies from the threats posed by the most lethal military weapons ever invented and the missiles which deliver these weapons.

Today, the international situation is far different than in 1972 when the ABM Treaty was signed and missile defense for our Nation was banned.

Our treaty partner, the Soviet Union, is no more. Our relationship with Russia is still evolving, but clearly we cannot remain mired in the notion that our two great nations are implacable enemies. Far from a world in which two giants embraced each other in a death grip, today, many nations, some of them unstable, unpredictable and hostile to the United States, either have or are seeking to acquire ballistic missiles, weapons of mass destruction, or both.

Yet today, despite these greatly changed circumstances in the world, our Nation remains completely defenseless against attack by even a single ballistic missile. Our friends and allies do not have the capability to defend themselves against short, medium, and intermediate range ballistic missile threats.

Many in Congress have long recognized the critical need for missile defenses. I was a cosponsor of Cochran bill, which was finally enacted into law despite the strong opposition of the Clinton administration. That act—which is now the law of the land—states that “it is the policy of the United States to deploy as soon as technologically possible an effective National Missile Defense system. . .” against limited missile attacks. The decision to deploy has been made. President Bush has made that decision and Congress has already endorsed it. What we are now debating is “when” and “how” to deploy—not “if.”

We will today, I believe, hear many of the specifics in the BMDO program proposal that will help answer the questions of when and how. The lateness with which our committee has received the defense budget is a matter of concern, and time is short. I understand that the BMD program is intended to provide a flexible path forward. At the same time, in our oversight capacity, we need to have a clear sense of program content and structure to determine whether the BMDO budget proposal will support the goal of deploying effective missile defense systems as soon as technologically possible.

While the BMD program is vitally important, it is bound up in wider policy considerations, some of which I have already noted. Consequently, part of the path for-

ward must involve continued consultation with our allies and Russia. I commend the President for reaching out to allies and friends, and to Russia, to build a new foundation of security based on openness and trust and to move beyond the confines of Cold War relationships.

To those who would argue that deployment of missile defenses is too dangerous and destabilizing I would say this: given American leadership a chance. If the United States leads, there is every reason to believe that Russia and our allies will respect American determination to move forward and work with us to build a safer world. But if congress undermines this effort, we will surely cede to others the right to dictate American vulnerability and that of our allies to missile threats from rogue nations.

I am looking forward to the discussion with Secretary Wolfowitz today about the complex policy issues, ranging from arms control, to deterrence policy, to our relationships with Russia, Europe, and our Asian friends and allies, that all relate to our efforts to defend our homeland, allies, and forces abroad from missile attack. Not all of the Department's answers, particularly with respect to the arms control implications of the BMDO program about which we will hear today, have been entirely clear or consistent. I anticipate that any confusion that has been created by this lack of consistency will be addressed today.

Thank you again, Senator Levin, for your courtesy.

Chairman LEVIN. Thank you, Senator Warner.
Secretary Wolfowitz.

STATEMENT OF HON. PAUL D. WOLFOWITZ, DEPUTY SECRETARY OF DEFENSE

Secretary WOLFOWITZ. Mr. Chairman, Senator Warner, members of the committee, before I get into my testimony I'd like to thank you particularly but also the ranking member and the entire committee and your hard-working staffs for moving so quickly with our nominees. I know you held hearings when you weren't even officially organized yet to do so, and I know you moved, I think 15 of our nominees to the floor. We desperately need them. I hope the full Senate will act with the expedition that you did, but I sincerely thank you and everyone who participated in that. There are more coming. We need help.

I also appreciate this opportunity to testify before you on this very important subject. General Kadish and I are here to try to answer in as much detail as we possibly can your questions and your concerns and to describe the program and to address those issues that you've raised—very important issues about where we are heading with respect to the treaty. But let me begin with a broader sketch.

Imagine, if you will, the following scenario. A rogue state with a vastly inferior military but armed with ballistic missiles and weapons of mass destruction commits an act of aggression against a neighboring country. As President Bush sends forces into the theater to respond, the country's genocidal dictator threatens our allies and deployed forces with a ballistic missile attack. Almost without warning, missiles rain down on our troops and pound into densely populated residential neighborhoods of allied capitals. Panic breaks out. Sirens wail as rescue crews in protective gear search the rubble for bodies and rush the injured to hospitals. Reporters mumbling through their gas masks attempt to describe the destruction as pictures of the carnage are instantaneously broadcast around the world.

Mr. Chairman, that scene is not science fiction. It is not a future conflict scenario dreamed up by creative Pentagon planners. It is a description of events that took place 10 years ago during the Per-

sian Gulf War—events that Senator Warner personally witnessed in Tel Aviv. I too have a vivid recollection of those events. When Saddam Hussein was launching SCUD missiles against Israel, I was sent there with Deputy Secretary of State Lawrence Eagleburger to help persuade Israel not to get drawn further into that war. We saw children walking to school carrying gas masks in gaily decorated boxes—no doubt to try to distract them from the possibility of facing mass destruction. They were awfully young to be thinking about the unthinkable. With those missiles, Saddam Hussein terrorized a generation of Israeli children and almost succeeded in changing the entire strategic course of the Gulf War.

This year is the tenth anniversary of the first U.S. combat casualties from a ballistic missile attack. In the waning days of Operation Desert Storm, a single SCUD missile hit a U.S. military barracks in Dhahran, killing 28 of our soldiers and wounding 99, 13 of them from a single small town in Pennsylvania called Greensburg. For American forces, it was the worst single engagement of the Gulf War. For 13 families in Greensburg, it was the worst day of their lives. Today, 10 years later, it is appropriate to ask: How much better able are we to meet a threat that was already real and serious 10 years ago—and has become even more so today? The answer, sadly, is not much better.

Today our capacity to shoot down a SCUD missile is not much improved from 1991, when we deployed—as Senator Warner correctly recalled—on an emergency basis the PAC-2 missiles to Israel and to Saudi Arabia and other countries.

We are still a year or 2 away from initial deployment of the PAC-3, our answer to the SCUD, and let me add, a very effective answer, and General Kadish will be talking about that technology in a few minutes. But we are still many years from full deployment. Today, our forces in the Persian Gulf and Korea, and the civilian populations they defend, have almost no means of protection against North Korean ballistic missiles armed with both chemical and conventional warheads. With no defenses, an attack by North Korea could result in tens or even hundreds of thousands of casualties.

Mr. Chairman, we underestimated the ballistic missile threat 10 years ago and today, a decade later, we are in danger of underestimating it still. The time has come to lift our heads from the sand and deal with unpleasant but indisputable facts. The short-range missile threat to our friends, our allies, and our deployed forces arrived a decade ago. The intermediate-range missile threat is here now and the long-range threat to American cities is just over the horizon—a matter of years, not decades, away—and our people and our territory are defenseless. Why? The answer to that last question has four letters: A-B-M-T—the ABM Treaty.

For the past decade, our government has not taken seriously the challenge of developing defenses against missiles. We have not adequately funded it. We have not believed in it, and we have given the ABM Treaty priority over it. That is not how this country behaves when we are serious about a problem. It's not how we put a man on the moon in 10 years. It's not how we developed the Polaris program or intercontinental ballistic missiles in even less time. The time to get serious is long past. The number of countries pur-

suing nuclear, chemical, and biological weapons is growing. The number of countries pursuing advanced conventional weapons and ballistic missiles is growing.

Consider these facts. In 1972, we knew of only five countries that had nuclear weapons. Today, we know of 12 with nuclear weapons programs. In 1972, we knew of a total of nine countries that had ballistic missiles. Today, we know of 28. In just the last 5 years, more than 1,000 of those missiles of all ranges have been produced. Those are just the cases that we know of. There are dangerous capabilities being developed at this very moment that we do not know about and which we may not know about for years—perhaps only after they are deployed. For example, in 1998 North Korea surprised the world with its launch of a Taepo Dong 1 missile over Japan with a previously unknown and unanticipated third stage. The intelligence community tells us that this launch demonstrated a North Korean capability to deliver a small payload to the United States. North Korea is now developing the Taepo Dong 2 missile, which will be able to strike even deeper into U.S. territory and carry an even larger weapons payload. If we do not build defenses against these weapons now, hostile powers will soon have, or may already have, the ability to strike U.S. and allied cities with nuclear, chemical, or biological weapons. They might not even have to use the weapons in their possession to affect our behavior and achieve their ends.

While we have been debating the existence of the threat for nearly a decade, other countries have been busily acquiring, developing, and proliferating missile technology. We can afford to debate the threat no longer. We are in a race against time and we are starting behind. Thanks in no small part to the constraints of the ABM Treaty, we have wasted the better part of a decade. We cannot afford to waste another one.

President Bush has declared his intention to develop and deploy defenses capable of protecting the American people, our friends, our allies, and forces around the world from limited ballistic missile attack. The 2002 amended budget requests \$8.3 billion for missile defense.

We have designed a program to develop and deploy as soon as is appropriate, and General Kadish will be describing it in more detail. Developing a proper layered defense will take time. It requires aggressive exploration of key technologies, particularly those that have been constrained in the past by the ABM Treaty. So, we plan to build it incrementally, deploying capabilities as the technology is proven ready, and then adding new ones over time as they become mature.

We have not yet chosen a systems architecture to deploy. We are not in a position to do so because so many promising technologies were not pursued in the past.

In order to accelerate the program, we must first broaden the search for effective technologies before we can move forward toward deployment. We must dust off technologies that were shelved, consider new ones, and bring them all into the development and testing process. To do this we have designed a flexible and strengthened research, development, testing, and evaluation (RDT&E) program to examine the widest possible range of promis-

ing technologies and basing modes, including land, air, sea, and space-based capabilities that had previously been disregarded or inadequately explored.

Notwithstanding the delays of the past decade, the capability to defend America is within our grasp. A great deal of work was done. The technology of 2001 is not the technology of 1981, or, for that matter, 1991.

Today, ballistic missile defense is no longer a problem of invention. It is a challenge of engineering. It is a challenge we are up to and General Kadish will describe in a few minutes how to go about it. Before he does, Mr. Chairman, let me address the very important questions about the ABM Treaty and try as best as I can to answer your very pertinent questions.

Our program is designed to develop, as I said, the most capable possible defense for our country, our allies, and our deployed forces at the earliest feasible time. That means it must at some point, and increasingly over time, encounter the constraints imposed by the ABM Treaty. We will not conduct tests solely for the purpose of exceeding the constraints of the treaty, but neither have we designed our program to avoid doing so.

However, this administration does not intend to violate the ABM Treaty. We intend to move beyond it. We are working to do so on two parallel tracks: First, we are pursuing the accelerated research, development, and testing program that I have described. Second, we are engaged in discussions with Russia on a new security framework—one that would reflect the fact that the Cold War is long over and that the U.S. and Russia are not enemies. We are moving forward on both of these tracks simultaneously, and we feel the prospects for success in both cases are promising.

Mr. Chairman, we have begun a dialogue with Russia on how to build a new security relationship, one whose foundation does not rest on the prospect of the mutual annihilation of our respective populations that was the basis of the old U.S.-Soviet relationship. That is not a healthy basis for U.S.-Russian relations in the 21st century.

On his recent visit to Europe, President Bush had good discussions with President Putin, and Secretary Rumsfeld had an unexpectedly productive dialogue at NATO last month with Russian Defense Minister Sergei Ivanov. Indeed, after their meeting, Minister Ivanov declared his agreement with Secretary Rumsfeld, and I'm quoting from the Russian Defense Minister, "there are not only more threats facing us now in the 21st century, but they are multifaceted—much more so than in the past."

Our discussions with Russia are ongoing, and we have no reason to believe they will fail. The question of whether we will violate the ABM Treaty in 2002 presumes they will fail. But there is no reason to assume that and if we succeed, the ABM Treaty will no longer be an obstacle to protecting the American people, our allies, or our deployed forces from a ballistic missile attack.

We hope and expect to have reached an understanding with Russia by the time our development program bumps up against the constraints of the treaty. We would prefer a cooperative outcome, and we are optimistic that such an outcome is possible. But we must achieve release from the constraints of the treaty.

If we all agree that a cooperative outcome is the preferable one, I would submit, Mr. Chairman, that it is important also for Congress to demonstrate the same resolve as President Bush that we are going to proceed with development of defenses to protect our people, our friends and allies, and our forces around the world—defenses that cannot, by the wildest stretch of the imagination, be considered a threat to Russia or to Russia's broader interests. Conversely, if we give Russia the mistaken impression that, by insisting on adherence to the ABM Treaty, they can exercise a veto over our development of missile defenses, the unintended consequence could be to rule out, and certainly make a cooperative solution more difficult and perhaps leave the President no choice but to withdraw from the treaty unilaterally.

As I stated earlier, as the program develops and the various testing activities mature, one or more of those will inevitably bump up against treaty restrictions and limitations. Such an event is likely to occur in months rather than in years.

Mr. Chairman, this is the reason it has been difficult and remains still somewhat difficult to answer your questions with precision, but we're trying today to get as much precision as we possibly can. It is not possible to know with certainty whether that will occur in the coming year. This uncertainty is in part the result of the inevitable uncertainty of all research and development programs. You learn from your tests. You proceed from your tests. Your program gets altered depending on the results of your test. But the uncertainty also reflects legal uncertainties. Many of the early issues that we will encounter inevitably involve legal complexities; legal ambiguities. These we will fully resolve through the treaty Compliance Review Group and the established procedure for addressing those issues.

In the interest, Mr. Chairman, of trying to give you more precision about where we see those issues coming in the next fiscal year, let me give you what I believe are the most important examples.

For example, the test bed currently scheduled to begin construction in April 2002 is designed to permit the testing of a ground-based midcourse capability under realistic operational conditions. There will also be opportunities, while we are testing the Aegis midcourse system, to test the ability of Aegis ship-based radars to track long-range ballistic missiles and there will also be opportunities in the coming fiscal year, if the program proceeds as planned, to combine the data from radars used in midcourse tests with the radars used to track short-range missiles. Will these tests exceed the limits of the treaty? In each case, you will be able to find lawyers who can argue on all three sides of the coin, but we have an established system for resolving these difficult issues and what I can tell you is this: by the time a planned development activity encounters ABM Treaty constraints, we fully hope and intend to have reached an understanding with Russia. We would expect to identify any such issue 6 months in advance of its occurrence. At that point, we will either have reached an understanding with Russia, in which case the question would be moot, or we would be left with two far from optimal choices: either to allow an obsolete treaty to prevent us from doing everything we can to defend America, or to

withdraw from the treaty unilaterally, which we have every legal right to do.

However, even in the latter circumstance, we should continue our efforts to reach an understanding with Russia. But our goal is to reach an understanding with Russia well before that time. Such an understanding is in both countries' interest. The end of the Cold War has fundamentally transformed our relationship. We ask for your support as we continue to work towards that cooperative solution. I can assure you that the President will adhere to the requirements of the treaty to conduct the proper notifications as we go forward.

Let me conclude with a few words about the new deterrence framework. We are optimistic about the prospects of reaching an understanding with Russia because the Cold War is over. The Soviet Union is gone. Russia is not our enemy. We are no longer locked in a posture of Cold War ideological antagonism. Yet, the ABM Treaty codifies a Cold War relationship that is no longer relevant in the 21st century.

The missile defenses we deploy will be precisely that—defenses. They will threaten no one. They will, however, deter those who would threaten us or our friends with a ballistic missile attack. Russia is not such a country. Americans do not lie awake at night worrying about a massive Russian first strike, the way they worried about a Soviet first strike during the Cold War.

Our missile defenses will be of no threat to Russia. Their purpose will be to protect against limited missile attacks that are now possible from an increasing number of sources—but not conceivably against the thousands of missiles in Russia's arsenal. Further, they will be just one part of a larger 21st century deterrence framework.

Just as we intend to build layered defenses to deal with missile threats at different stages, we also need a strategy of layered deterrence which can deter and dissuade a variety of emerging threats at different stages. Just as America's overwhelming naval power discourages adversaries from investing in competing navies, we should develop capabilities that, by their very existence, discourage adversaries from investing in other hostile capabilities. Missile defense is one example where we hope to achieve exactly that. It has received significant attention because it is new—but it is just one element of a new deterrence framework that includes several mutually-reinforcing layers of deterrence, including diplomacy, arms control, counterterrorism, counterproliferation, and smaller but effective offensive nuclear forces.

Having said what the program aims to do, let me say, briefly, what the program is not. It is not an effort to build an impenetrable shield around the United States. This is not Star Wars. We have a much more limited objective to deploy effective defenses against limited missile attack. It is not a threat to anyone and will be a problem only for those states that wish to threaten our people, our allies, or our deployed forces with ballistic missiles.

Very importantly, Mr. Chairman, it will not undermine arms control or spark an arms race. If anything, I believe building effective defenses will reduce the value of ballistic missiles and remove incentives for their development and proliferation. Since they will have virtually no effect on Russia's capabilities, there is no incen-

tive for Russia to spend scarce resources to try to overcome them. China is already engaged in a rapid modernization of its missile capabilities, and will continue this modernization whether or not we build defenses. But, in fact, both the Russians and the Chinese, and I think this is very important, will be able to see that we are reducing our offensive nuclear forces substantially and there is no need for them to build up theirs. In this budget proposal alone, with Peacekeeper, Trident, and B-1 reductions, we will be reducing START-countable warheads by well over a thousand. We plan to reduce our nuclear forces no matter what Russia decides to do, but we believe it is in their best interest, and we think sooner rather than later, they will recognize that it is in their best interest to follow the same path.

This is not a "scarecrow" defense. We intend to build and deploy defenses that will grow more and more effective over time. The more capable, the better. But defenses don't have to be perfect to save lives and reduce casualties. No defense is 100 percent effective. Notwithstanding the billions we spend on counterterrorism, and should be spending on counterterrorism, we did not stop terrorist attacks on the Khobar Towers or on our embassies in Kenya and Tanzania, or on the World Trade Center. Yet no one would suggest that we stop spending money on counterterrorism because we have no perfect defense. Moreover, defenses don't need to be 100 percent effective to make a significant contribution to deterrence.

I've heard some astronomical figures attached to this program, Mr. Chairman. But we are not planning to spend hundreds of billions of dollars of taxpayer money. The money we propose to spend is comparable to other major defense development programs, and comparable to other elements of our security strategy. We are proposing \$8.3 billion for missile defense in 2002. That is still a large amount, but the consequences of failure could be larger still.

Finally, I do not believe it diverts attention and resources from other more pressing threats. Some have argued that we should not spend any money on missile defense, because the real threat comes from terrorists using suitcase bombs. There is no question that terrorist threat is a real one, and we should be addressing it. But we shouldn't lock our front door because a burglar might break through the window. We should address both problems.

As we move forward with accelerated testing and development, there are going to be test failures. There isn't a single major technological development in human history that didn't proceed with a process of trial and error, including many of our most successful weapons systems.

Let me just mention six. The Corona satellite program, which produced the first overhead reconnaissance satellites, suffered 11 straight test failures at the beginning of the program. The Thor Able and Thor Agena launch programs failed four out of five times. The Atlas Agena failed five out of eight times. The Scout launches failed four out of six times. The Vanguard program failed 11 of its first 14 tries. The Polaris failed in 66 out of 123 test flights. Yet, from these failures and from the successes came some of the most effective capabilities we have ever fielded. Failure is how we learn.

If a program never suffers test failures, it probably means we're not pushing the envelope hard enough.

Mr. Chairman, let me conclude where I began. This threat is not fictional. It is not limited. It is not remote. It won't disappear if one or another troublesome regime disappears. This is not a partisan issue. We do not know whether the President who first faces a crisis with a rogue state capable of striking Los Angeles, Detroit, or New York with nuclear, chemical, or biological weapons will be a Republican or a Democrat. But we do know that individual will be an American. That is how we must proceed—not as Republicans or Democrats, but as Americans. Let future generations who look back at this period see statesmen who rose above party lines to make sure that America and its allies and its deployed forces were protected against this real emerging threat.

Thank you very much for your attention.

[The prepared statement of Secretary Wolfowitz]

PREPARED STATEMENT BY HON. PAUL D. WOLFOWITZ

INTRODUCTION

Chairman Levin, Senator Warner, members of the committee, thank you for this opportunity to testify on the administration's 2002 budget request for Ballistic Missile Defense.

Imagine, if you will, the following scenario: A rogue state with a vastly inferior military, but armed with ballistic missiles and weapons of mass destruction, commits an act of aggression against a neighboring country. As President Bush sends U.S. forces into theater to respond, the country's genocidal dictator threatens our allies and deployed forces with a ballistic missile attack. Suddenly, almost without warning, missiles rain down on our troops, and pound into the densely populated residential neighborhoods of allied capitals. Panic breaks out. Sirens wail, as rescue crews in protective gear race to search the rubble for bodies and rush the injured to hospitals. Reporters, mumbling through their gas masks, attempt to describe the destruction, as pictures of the carnage are instantaneously broadcast across the world.

Mr. Chairman, the scene I have described is not science fiction. It is not a future conflict scenario dreamed up by creative Pentagon planners. It is a description of events that took place 10 years ago—during the Persian Gulf War.

I have a particularly vivid recollection of those events. When Saddam Hussein was launching SCUD missiles against Israel, I was sent there with Deputy Secretary of State Lawrence Eagleburger to help persuade Israel not to get drawn further into the war, as Saddam Hussein was seeking to do. We saw children walking to school carrying gas masks in gaily decorated boxes—no doubt to try to distract them from the possibility of facing mass destruction. They were awfully young to have to think about the unthinkable. With those missiles, Saddam Hussein terrorized a generation of Israeli children, and almost succeeded in changing the entire strategic course of the Gulf War.

This year marks the 10th anniversary of the first U.S. combat casualties from a ballistic missile attack. In the waning days of Desert Storm, a single SCUD missile hit a U.S. military barracks in Dhahran, killing 28 of our soldiers and wounding 99. Thirteen of those killed came from a single small town in Pennsylvania called Greensburg. For American forces, it was the single worst engagement of the Gulf War. For 13 families in Greensburg, it was the single worst day of their lives.

Today, 10 years later, it is appropriate to ask how much better able are we to meet a threat that was already real and serious 10 years ago—and has become even more so today? The answer, sadly, is hardly any better. Despite this tragic experience, here we are, a decade later, still virtually not yet able to defend against ballistic missile attacks, even from relatively primitive SCUD ballistic missiles.

Today, our capacity to shoot down a SCUD missile is not much improved from 1991. We are still a year or 2 away from initial deployment of the PAC-3—our answer to the SCUD, and an effective one—and many years from full deployment. Today our forces in the Persian Gulf and Korea—and the civilian populations they defend—have almost no means of protection against North Korean ballistic missiles armed with both chemical and conventional warheads. With no missile defenses, an

attack by North Korea could result in tens or even hundreds of thousands of casualties.

To those who wonder why so many of the regimes hostile to the United States—many of them desperately poor—are investing such enormous sums of money to acquire ballistic missiles, I suggest this possible answer: *They know we don't have any defenses.*

It cannot have escaped their notice that the only weapons that really permitted Saddam Hussein to make American forces bleed during the Gulf War—the only weapons that allowed him to take the war into the territory of his adversaries and murder innocent women and children—were ballistic missiles.

We underestimated the ballistic missile threat 10 years ago—and today, a decade later, we are underestimating it still.

Mr. Chairman, the time has come to lift our heads from the sand and deal with some unpleasant but indisputable facts: The short-range missile threat to our friends, allies, and deployed forces arrived a decade ago; the intermediate-range missile threat is now here; and the long-range threat to American cities is just over the horizon—a matter of years, not decades, away—and our people and territory are defenseless.

Why? The answer has four letters: A–B–M–T.

For the past decade, our government has not taken seriously the challenge of developing defenses against missiles. We have not adequately funded it, we have not believed in it, and we have given the ABM Treaty priority over it. That is not how America behaves when we are serious about a problem. It is not how we put a man on the moon in just 10 years. It is not how we developed the Polaris program or intercontinental ballistic missiles in even less time.

The time to get serious is long past. Today, the number of countries pursuing nuclear, chemical and biological weapons is growing. The number of countries pursuing advanced conventional weapons is growing. The number of countries pursuing ballistic missile technology is growing. The number of missiles on the face of the earth is growing.

Consider these facts:

- In 1972, when the ABM Treaty was signed, the number of countries pursuing biological weapons was unknown; today there are at least 13;
- In 1972, 10 countries had known chemical weapons programs; today there are 16 (4 countries ended theirs, but 10 more jumped in to replace them);
- In 1972, we knew of only 5 countries that had nuclear weapons programs; today we know of 12;
- In 1972, we knew of a total of 9 countries that had ballistic missiles; today we know of 28, and in just the last 5 years more than 1,000 missiles of all ranges have been produced; and
- Those are only the cases that we know of. There are dangerous capabilities being developed at this very moment that we do not know about, and which we may not know about for years—perhaps only after they are deployed.

For example, in 1998 North Korea surprised the world with its launch of a Taepo Dong 1 missile over Japan, with a previously unknown third stage. The intelligence community tells us this launch demonstrated a North Korean capability to deliver a small payload to the United States. North Korea is currently developing the Taepo Dong 2 missile, which will be able to strike even deeper into U.S. territory and carry an even larger weapons payload.

Other unfriendly regimes, like Iran, Syria, and Libya, are also developing missiles of increasing range and sophistication. A number of these countries are less than 5 years away from being able to deploy such capabilities. These regimes are collaborating with each other, sharing technology and know-how.

The countries pursuing these capabilities are doing so because they believe they will enhance their power and influence; because they believe that if they can hold the American people at risk, they can prevent us from projecting force to stop acts of aggression, and deter us from defending our interests around the world.

If we do not build defenses against these weapons now, hostile powers will soon have—or may already have—the ability to strike U.S. and allied cities with nuclear, chemical or biological weapons. They will have the power to hold our people hostage to blackmail and terror. They may secure, in their estimation, the capability to prevent us from forming international coalitions to challenge their acts of aggression and force us into a truly isolationist posture. They would not even have to use the weapons in their possession to affect our behavior and achieve their ends.

But we cannot be sure they would not use these weapons in a crisis. If Saddam Hussein had the ability to strike a Western capital with a nuclear weapon, would he really be deterred by the prospect of a U.S. nuclear strike that would kill millions of Iraqis? Is he that concerned about his people? Would we really want our only option in such a crisis to be destroying Baghdad and its people? A policy of intentional vulnerability is not a strategy to deal with the dangers of this new century.

While we have been debating the existence of the threat for nearly a decade, other countries have been busily acquiring, developing and proliferating missile technology. We can afford to debate the threat no longer. We are in a race against time—and we are starting from behind. Thanks in no small part to the constraints of the antiquated ABM Treaty, we have wasted the better part of a decade. We cannot afford to waste another one.

DEVELOPMENT AND TESTING

President Bush has declared his intention to develop and deploy defenses capable of protecting the American people, our friends, allies and forces around the world from limited ballistic missile attack. The 2002 amended budget requests \$8.3 billion for missile defense.

We intend to develop defenses, capable of defending against limited missile attacks from a rogue state or from an accidental or unauthorized launch. We intend to develop layered defenses, capable of intercepting missiles of any range at every stage of flight—boost, midcourse, and terminal.

We have designed a program to develop and deploy as soon as is appropriate. Developing a proper layered defense will take time. It requires more aggressive exploration of key technologies, particularly those that have been constrained by the ABM Treaty. So we plan to build incrementally, deploying capabilities as the technology is proven ready, and then adding new capabilities over time as they become mature.

We have designed the program so that, in an emergency, we might, if appropriate, deploy test assets to defend against a rapidly emerging threat. This has been done a number of times before with other military capabilities, both in the Gulf War and in Kosovo. But barring such an emergency, we need to consider the operational deployment of test assets very carefully—because such deployments can be disruptive, and can set back normal development programs.

However, we have not yet chosen a systems architecture to deploy. We are not in a position to do so because so many promising technologies were not pursued in the past. The program we inherited was designed not for maximum effectiveness, but to remain within the constraints of the ABM Treaty. As a result, development and testing programs for defense against long-range threats were limited to ground-based components—ignoring air, sea and space-based capabilities with enormous potential.

In order to accelerate the program, we must first broaden the search for effective technologies before we can move forward toward deployment. We must dust off technologies that were shelved, consider new ones, and bring them all into the development and testing process.

To do this, we have designed a flexible and strengthened research, development, testing and evaluation program to examine the widest possible range of promising technologies, of which there are many. We will expand our program to add tests of technologies and basing modes, including land, air, sea, and space-based capabilities that had been previously disregarded or inadequately explored.

Notwithstanding the delays of the past decade, the capability to defend America is within our grasp. The technology of 2001 is not the technology of 1981, or, for that matter, 1991—the year we suffered our first losses to a ballistic missile attack by a rogue state.

Today, ballistic missile defense is no longer a problem of invention—it is a challenge of engineering. It is a challenge we are up to.

ABM TREATY

Our program is designed to develop the most capable possible defense for our country, our allies and our deployed forces at the earliest feasible time. That means it will at some point—and increasingly over time—encounter the constraints imposed by the ABM Treaty. We will not conduct tests solely for the purpose of exceeding the constraints of treaty—but neither will we design our program to avoid doing so.

However, this administration does not intend to violate the ABM Treaty; we intend to move beyond it. We are working to do so on two parallel tracks: First, we are pursuing the accelerated research, development and testing program I have de-

scribed. Second, we are engaged in discussions with Russia on a new security framework that reflects the fact that the Cold War is over and that the U.S. and Russia are not enemies. We are moving forward on both of these tracks simultaneously, and we feel the prospects for success in both cases are promising.

We have begun a dialogue with Russia on how we can build a new security relationship whose foundation does not rest on the prospect of the mutual annihilation of our respective populations that was the basis of the old U.S.-Soviet relations. That is not a healthy basis for U.S.-Russian relations in the 21st century.

On his recent visit to Europe, President Bush had a good discussion with President Putin, and Secretary Rumsfeld had a productive dialogue at NATO last month with Russian Defense Minister Sergei Ivanov. Indeed, after their meeting, Minister Ivanov declared his agreement with Secretary Rumsfeld that "there are not only more threats facing us now in the 21st century, but they are multifaceted, much more so than they were in the past."

Our discussions with Russia are ongoing, and we have no reason to believe that they will fail. The question of whether we will violate the ABM Treaty in 2002 presumes they will fail. But there is no reason to assume we will fail; and if we succeed, the ABM Treaty will no longer be an obstacle to protecting the American people, our allies and deployed forces from ballistic missile attack.

We hope and expect to have reached an understanding with Russia by the time our development program bumps up against the constraints of the ABM Treaty. But President Bush has also made clear that a 30-year-old treaty designed to preserve the nuclear balance of terror during the Cold War must not be allowed to prevent us from taking steps to protect our people, our forces, and our allies. We would prefer a cooperative outcome, and we are optimistic that such an outcome is possible. But we must achieve release from the constraints of the ABM Treaty.

If we all agree that a cooperative outcome is preferable, then it is important that Congress demonstrate the same resolve as the President to proceed with development of defenses to protect our people, our friends and allies, and our forces around the world—defenses that cannot, by the wildest stretch of the imagination, be considered a threat to Russia or its security.

If, conversely, we give Russia the mistaken impression that, by insisting on adherence to the ABM Treaty, they can exercise a veto over our development of missile defenses, the unintended consequence could be to rule out a cooperative solution and leave the President no choice but to walk away from the treaty unilaterally.

As I stated earlier, the current planned testing program is not designed with the constraints of the ABM Treaty in mind; neither has it been designed for the purpose of exceeding those constraints. However, as the program develops and the various testing activities mature, one or more aspects will inevitably bump up against treaty restrictions and limitations. Such an event is likely to occur in months rather than in years. It is not possible to know with certainty whether it will occur in the coming year. This uncertainty is in part the result of inevitable uncertainty of all research and development programs. Many of the early issues will involve legal complexities, which we will fully resolve through the treaty Compliance Review Group.

For example, the test bed currently scheduled to begin construction in April 2002 is designed to permit the testing of a ground-based midcourse capability under realistic operational conditions. There will also be opportunities, while we are testing the Aegis midcourse system, to test the ability of Aegis ship-based radars to track long-range ballistic missiles. There will also be opportunities to combine the data from radars used in midcourse tests with the radars used to track short-range missiles. Will these tests exceed the limits of the treaty? In each case, there will be those who argue on all three sides of the coin. We have an established system for resolving these difficult issues.

What I can tell you is this: by the time a planned development activity encounters ABM Treaty constraints, we fully hope and intend to have reached an understanding with Russia. We would expect to identify such issues 6 months in advance. We will either have reached an understanding with Russia, in which case the question would be moot, or we would be left with two less than optimal choices: to allow an obsolete treaty to prevent us from defending America, or to withdraw from the treaty unilaterally, which we have every legal right to do.

However, even in the latter circumstance, we should continue our efforts to reach an understanding with Russia. But our goal is to reach an understanding with Russia well before that time. Such an understanding is in both countries' interests. The end of the Cold War has fundamentally transformed our relationship. We ask for your support as we continue to work towards a cooperative solution. I can assure you that the President will adhere to the requirements of the treaty to conduct the proper notifications as we go forward.

We are optimistic about the prospects of reaching an understanding with Russia, because reaching a new security framework is in both of our nations' interests. The Cold War is over. The Soviet Union is gone. Russia is not our enemy. We are no longer locked in a posture of Cold War ideological antagonism. Yet the ABM Treaty codifies a Cold War relationship that is no longer relevant to the 21st century.

The missile defenses we deploy will be precisely that—defenses. They will threaten no one. They will, however, deter those who would threaten us with ballistic missile attack. We do not consider Russia such a country. Americans do not lie awake at night worrying about a massive Russian first strike, the way they worried about a Soviet first strike during the Cold War.

Our missile defenses will be no threat to Russia. Their purpose will be to protect against limited missile attacks from an increasing number of possible sources—but not against the thousand of missiles in Russia's arsenal.

Further, they will be just one part of the larger, 21st century deterrence framework we are working to build. During the Cold War, our aim was to deter one adversary from using an arsenal of existing weapons against us. In the 21st century, our challenge is not only to deter multiple potential adversaries from using existing weapons, but to dissuade them from developing dangerous new capabilities in the first place.

This requires a different approach to deterrence. Just as we intend to build "layered defenses" to deal with missile threats at different stages, we also need a strategy of "layered deterrence" in which we develop a mix of capabilities—both offensive and defensive—which can deter and dissuade a variety of emerging threats at different stages.

Such a strategy would aim to dissuade countries from pursuing dangerous capabilities in the first place, by developing and deploying U.S. capabilities that reduce their incentives to compete; to discourage them from investing further in existing dangerous capabilities that have emerged, but are not yet a significant threat; and to deter them from using dangerous capabilities once they have emerged to threaten us all, with the threat of devastating response.

Just as America's overwhelming naval power discourages potential adversaries from investing in building competing navies to threaten freedom of the seas—because, in the end, they would spend a fortune and not accomplish their strategic objectives—we should develop a range of new capabilities that, by their very existence, dissuade and discourage potential adversaries from investing in other hostile capabilities.

Missile defense is one example. It has received significant attention because it is new—but it is just one element of a new deterrence framework that includes several mutually-reinforcing layers of deterrence, including diplomacy, arms control, counterterrorism, counterproliferation and smaller but effective offensive nuclear forces.

WHAT THE PROGRAM IS NOT

We have discussed what the program is; we must also discuss what the program is not.

- It is not an effort to build an impenetrable shield around the United States. This is not Star Wars. We have a much more limited objective to deploy effective defenses against limited missile attack. Indeed the change in the threat—from the thousands of missiles in the Soviet arsenal to handfuls of limited missile attacks—makes deployment of effective defenses more realistic than ever before.
- It is not a threat to anyone, and will be a problem only for those rogue states that wish to threaten our people, our allies or our deployed forces, with ballistic missile attacks.
- It will not undermine arms control or spark an arms race. If anything, building effective defenses will reduce the value of ballistic missiles, and thus remove incentives for their development and proliferation. Since they will have virtually no effect on Russia's capabilities, there is no incentive for Russia to spend scarce resources to try to overcome them. China is already engaged in a rapid modernization of its missile capabilities, and will continue this modernization whether or not we build missile defenses. To the contrary, the Russians and the Chinese will be able to see that we are reducing our offensive nuclear forces substantially and there is no need for them to build up theirs. In this budget proposal alone, with Peacekeeper, Trident, and B-1 reductions, we will be reducing START-countable warheads by over 1,000. We plan to reduce our nuclear forces no matter what

Russia decides to do, but we believe it is in their best interest to follow the same path.

- It is not a "scarecrow" defense. We intend to build and deploy effective defenses at the earliest possible moment. Those defenses will grow more and more effective over time, as we deploy an increasingly sophisticated mix of capabilities that provide "layered defenses" against all ranges of missiles at all stages of flight. The more capable the better, but the defenses don't have to be perfect to save lives and reduce casualties. As imperfect as the PAC-2 system was during the Gulf War, there wasn't a single ally or commander who didn't clamor for more.

Will our defenses be 100 percent effective? Mr. Chairman, no defense is 100 percent effective. Notwithstanding the billions we spend on counterterrorism, we failed to stop terrorist attacks on the Khobar Towers, our embassies in Kenya and Tanzania, or the World Trade Center. Yet I know of no one who has suggested that we stop spending money on counterterrorism because we have no perfect defense. Moreover, defenses won't need to be 100 percent effective to make a significant contribution to deterrence.

- It will not cost the taxpayers hundreds of billions of dollars. The money we propose to spend on missile defense is comparable to other major defense development programs, and comparable to other elements of our security strategy. We are proposing \$8.3 billion for missile defense in 2002. That is still a large amount, but the consequences of the failure could be enormous.

- It does not divert attention and resources from other, more pressing threats. Some have argued that we should not spend money on missile defense, because the real threat comes from terrorists using suitcase bombs. That is like arguing that you should not lock your front door because a burglar can break in through your window. Both threats are real—but for the last decade, work on countering the terrorist threat has proceeded aggressively, while work on ballistic missile defense has been hamstrung by an obsolete theory. We are correcting that.

As we move forward with accelerated testing and development, Mr. Chairman, there will certainly be bumps along the way. We expect there to be test failures. There is not a single major technological development in human history that did not begin with a process of trial and error and many of our most successful weapons developments have been marked by testing failures:

- The Corona satellite program, which produced the first overhead reconnaissance satellites, suffered 11 straight test failures.
- The Thor Able and Thor Agena launch programs failed 4 out of 5 times.
- The Atlas Agena launches failed 5 out of 8 times.
- The Scout launches failed 4 out of 6 times.
- The Vanguard program failed 11 of its first 14 tries.
- The Polaris failed in 66 out of 123 flights.

Mr. Chairman, from these failures came some of the most effective capabilities ever fielded. Failure is how we learn. If a program never suffers test failures, it means someone is not taking enough risks and pushing the envelope. Intelligent risk taking is critical to any advanced development program—and it will be critical to the development of effective ballistic missile defenses.

CONCLUSION

Mr. Chairman, let me conclude where I began. This threat is not fictional. It is not limited. It is not remote. It is not going to disappear if one or another troublesome regime disappears.

- If there were a war in Korea tomorrow, our best intelligence estimates are that North Korean missiles would wreak havoc on population centers and our deployed forces in South Korea, even if armed only with conventional weapons, and North Korea now poses a significant threat to Japan as well.
- We know that it is a matter of time before Iran develops nuclear weapons, and may soon have the capacity to strike Israel and some NATO allies.

Think about what kind of hearings we would be having 3 or 4 years from now if Iran demonstrates intermediate-range capability to strike Israel or U.S. troops deployed in the Gulf—or if North Korea demonstrates the capability to strike the U.S. with long-range nuclear missiles. I, for one, don't want to have to come before this

committee and explain why we ignored the coming threat, and didn't do everything we could to meet it.

This is not a partisan issue. We do not now know whether the President who first faces a crisis with a rogue state capable of striking Los Angeles, Detroit or New York with nuclear, chemical or biological weapons will be a Republican or a Democrat. But we do know that individual will be an American. That is how we too must proceed—not as Republicans, or Democrats, but as Americans.

Let future generations who look back at this period not see partisan bickering, but statesmen who rose above party lines to make sure America and its allies and deployed forces were protected against this real emerging threat.

Thank you very much.

Chairman LEVIN. Thank you, Secretary Wolfowitz.
General Kadish.

**STATEMENT OF LT. GEN. RONALD T. KADISH, USAF,
DIRECTOR, BALLISTIC MISSILE DEFENSE ORGANIZATION**

General KADISH. Good morning, Mr. Chairman, members of the committee. It's a pleasure to appear before you today and to present the Department of Defense's fiscal year 2002 Ballistic Missile Defense (BMD) program and budget. To allow more time for your questions, I request that the prepared statement that I forwarded to the committee be entered into the record.

Chairman LEVIN. It will be made part of the record.

General KADISH. The fundamental objective of the BMD program is to develop the capability to defend the forces and territories of the United States, its allies, and friends from all classes of ballistic missiles. The Department will develop and deploy promising technologies and concepts in order to build and sustain an effective, reliable, and affordable missile defense system. The research, development, test, and evaluation (RDT&E) program is designed to enhance system effectiveness over time by developing layered defenses that employ complementary sensors and weapons to engage threats in the boost, midcourse, and terminal phases of flight and to deploy that capability incrementally.

At the direction of the Secretary of Defense, we have developed a research, development, and test program that focuses on missile defense as a single integrated ballistic missile defense, no longer differentiating between theater and National Missile Defense. This revised structure involves three basic thrusts. First, the new Ballistic Missile Defense program will build on the technical progress we have made to date by providing the funding required to develop and test elements of the previous program.

Second, the new program will pursue a broad range of activities in order to aggressively evaluate and develop technologies for the integration of land, sea, air, or space-based platforms to counter ballistic missiles in all phases of their flight. The new program will not cut corners. Rather, it is designed to pursue a parallel development path to improve the likelihood of achieving an effective, layered missile defense.

Third, the new testing program will incorporate a larger number of tests than in the past. They will employ more realistic scenarios and countermeasures. This will allow us to achieve greater confidence in our planning and development. Through this robust testing, we may discover opportunities to accelerate elements of the program based on their performance and increase the overall capability and credibility of the Ballistic Missile Defense System. This

approach is designed to enable contingency use of the demonstrated ballistic missile defense capabilities if directed.

The goal of the BMD System is a layered defense that provides multiple engagement opportunities along the entire flight path of a ballistic missile. Over the next 3 to 5 years, we will pursue parallel technical paths to reduce schedule and cost risk in the individual RDT&E efforts. We will explore and demonstrate kinetic and directed energy kill mechanisms for potential sea-, ground-, air-, and potentially space-based operations to engage threat missiles in the boost, midcourse, and terminal phases of flight. In parallel, sensor suites and battle management and command and control will be developed to form the backbone of this system.

Before I proceed to describe the new program in detail, I would like to make clear what this program does not do. It does not define a specific architecture yet. It does not commit to a procurement program for a full, layered defense. There is no commitment to specific dates for production and deployment other than for lower tier terminal defense elements. It is not a rush to deploy untested systems. It is not a step back to an unfocused research program. It is not a minor change to our previous program. Rather, this is a bold move to develop an effective, integrated layered defense against ballistic missiles of all ranges.

The new program is a major change in our approach to developing ballistic missile defense. The previous National Missile Defense program, for example, was a high-risk production and development deployment program dependent for its success on an RDT&E effort that was somewhat underfunded but charged with developing a system that would operate at the outset with near perfection. It was based on rigid military requirements. The new program is built around a fully-funded, rigorous RDT&E effort designed to demonstrate increasing capability over time through a robust, realistic testing program.

The objective of the new program is a layered defense to protect the United States, its allies, friends, and deployed forces against ballistic missiles of all ranges, and we will pursue this objective in the following way: First, we are recommending an acquisition approach that is evolutionary—one that will allow us to field systems incrementally once they are proven through robust testing. Because of uncertainties in the development program, the evolutionary approach is implemented in 2-year planning blocks. This allows us to adjust rapidly to change in the development performance of our sub-systems and allows us to build on our successes over time without the inherent difficulties of date certain expectations.

Second, rather than committing to a single architecture as we have done in the past, we will deploy over time different combinations of sensors and weapons consistent with our national strategic objectives.

We have designed the program so that, in an emergency and if directed, we might quickly deploy test assets to defend against a rapidly growing threat. This has been done before with other military capabilities, both in the Gulf War and in Kosovo. But barring such an emergency, we do not intend to deploy assets until they are ready because such emergency deployments are disruptive and can set back normal development programs by years.

The technical and operational challenges of intercepting ballistic missiles are unprecedented. While these challenges are significant, our testing accomplishments to date tell us they are not insurmountable. Given the threats we expect to face, there is a premium on fielding highly reliable and effective systems.

Reliability will be realized, in part, through redundancy in our system. Effectiveness is partly a function of the number of opportunities the system provides to intercept an in-flight missile and how early and often those opportunities occur in the missile's flight. Because we need redundancy, we determined that whatever BMD Systems we deploy, they should allow multiple engagement opportunities in the boost, in the midcourse, and terminal phases of a ballistic missile's flight.

The boost phase is that part of flight when the ballistic missile's rocket motors are ignited and propel the entire missile system towards space. It lasts roughly 3 to 5 minutes for long-range missiles and as little as 1 to 2 minutes for short-range missiles.

When the missile boosters are spent, the missile continues its ascent into what we call the midcourse part of flight, which lasts nominally 20 minutes for long-range missiles. In this stage of flight, a ballistic missile releases its payload warhead, submunitions, and/or penetration aids in space. The missile enters what we call the terminal phase when the missile or elements of its payload reenter the atmosphere. This is a very short phase, lasting from a few minutes to less than a minute.

We are presented with unique opportunities and challenges when engaging a threat missile in each of these phases. The layered defense, or defense-in-depth approach, will increase the chances that the missile and its payload will be destroyed.

Intercepting a missile in boost phase, for example, results in the defense of any target that the missile might be aimed at and can destroy a missile regardless of its design range. A midcourse intercept capability provides wide coverage of regions, while a terminal defense protects a localized area. Intercepting a missile near its launch point is always preferable to intercepting the same missile closer to its target. When we add shot opportunities in the midcourse and terminal phases of flight to boost phase opportunities, we increase significantly the probability we will be successful.

Another advantage of the layered approach is that it complicates an adversary's plans. Countermeasures, for example, will always be a challenge for the defense. But because countermeasures have to be tailored to the specific phase of the missile's flight, layered defenses pose major challenges to an aggressor.

The fiscal year 2002 program speeds development of established technologies, enables robust testing and evaluation of systems that are more mature, and explores new missile defense concepts and technologies. We plan to pursue multiple, parallel development paths to reduce the risk inherent in ballistic missile defense engineering with RDT&E initiatives in each of the boost, midcourse, and terminal defense segments of the overall system.

We do not want to be in a position, in other words, where we discover a fundamental design flaw in our kill vehicle or in our only sea-based booster that might be under development. That would amount to a single point failure that could cost us years in develop-

ing effective missile defenses. We must be agile in our engineering approaches to keep the program on track and affordable.

This robust RDT&E program aims to demonstrate what does and does not work. These activities showing the greatest promise will receive greater resource emphasis. Our progress will inform an annual high level decisionmaking process that will steer the BMD program in the most promising direction, taking into account optimal approaches and the most reliable information on costs that we can get. This process will allow us to make informed decisions regarding research, production, and any deployment.

This RDT&E approach will also minimize possible disruptive effects that the introduction of new technologies, development challenges, or changes in the threat otherwise could have on any Ballistic Missile Defense program and allow us to keep pressing forward along the most promising paths. We will pursue enough paths so that the scaling back of any one effort will not undermine progress in other areas and that technological advances we make even in failed efforts will be put to good use. This represents the best approach for pursuing promising capabilities that will allow us to get out in front and pace a dynamic ballistic missile threat.

Now I'd like to discuss the fiscal year 2002 budget and how it helps to implement this aggressive program. As I've said, we propose to invest in previous efforts as well as newer activities in order to set up multiple paths for solving this difficult technical challenge.

The amended budget adds \$2.54 billion to our program for a total of nearly \$8.3 billion DOD-wide and just over \$7 billion with the Ballistic Missile Defense Organization's (BMDOs) RDT&E program.

In the terminal defense segment we have \$968 million, an increase of \$212 million over fiscal year 2001 enacted funding.

In the midcourse, for both ground- and sea-based approaches, we have \$3.9 billion, an increase of \$1.4 billion, and in boost we have \$685 million, an increase of \$313 million over the fiscal year 2001 enacted funding.

In fiscal year 2002, we are requesting \$496 million for our sensors activities, which represents an increase of \$221 million over the fiscal year 2001 enacted funding.

For integration of these segments in the overall Ballistic Missile Defense System, we have \$780 million, which is an increase of \$253 million for test infrastructure and countermeasures.

These funds will enable us to improve the more mature BMD activities, begin development of the much needed BMD test bed, and undertake new concept development activities and experiments.

In the terminal defense segment, we will continue investment in two of our most mature programs, THAAD and Arrow. We have added resources to accelerate the acquisition of a THAAD radar and buy more test missiles. This will allow us to capitalize on any early flight test successes should our disciplined development program prove effective in the test program. The U.S-Israeli Arrow Program initiated deployments of its first battery this year. Next year, there will be additional flight-testing of the Arrow system, and we will invest in additional production capacity for the Arrow missile.

Patriot and Navy Area are approaching procurement and deployment decisions. For this reason, and in compliance with our program philosophy to have BMDO do research, development, test and evaluation and the services do procurement, and to support the services' air defense mission, the Department is transferring to respective services the responsibility for the execution and management of these three programs: Patriot 3, Navy Area, and the Medium Extended Air Defense System—MEADS. The transfer of these systems will maintain internal focus, consistency, and the interdependence of both BMDO and the services.

In the midcourse segment we will continue to make improvements to counter the long-range ICBM threat, and to expand the ballistic missile defense test bed. The test bed is a central part of this program. It will provide an operationally realistic environment to test system elements and integration and to prove our construction, transportation, and logistics concepts. Over time, the test bed will expand to include weapons and sensor capabilities, to improve overall missile defense capabilities as they are made available. We will also proceed toward the development of a sea-based midcourse capability against long-range missile threats. Under the new BMDO program, we will continue the Navy Theater Wide Aegis LEAP Intercept, or ALI program, to counter short-range threats.

In the boost defense segment, we will explore directed energy and kinetic energy options leading to experiments and demonstrations in the 2003 to 2005 timeframe. We are considering a sea-based boost activity to develop a high-speed, high-acceleration booster coupled with a boost-phase kill vehicle. This activity will simultaneously support a proof-of-concept space-based experiment somewhere after 2004 using a space-based kinetic energy kill vehicle.

We will continue the airborne laser development and plan a lethal demonstration in the 2003 to 2004 timeframe. We will also continue space-based laser risk reduction as we work towards an integrated flight experiment early in the next decade. The Department will consolidate program and management responsibility for the airborne laser and the space-based laser within BMDO.

The sensors program element funds two key efforts: the SBIRS-Low, which was transferred from the Air Force to BMDO, and the Russian-American observation satellites cooperative research project with Russia.

Mr. Chairman, we have an aggressive RDT&E program designed to enhance system effectiveness over time by developing layered defenses that employ complementary sensors and weapons to engage threat targets in the boost, midcourse, and terminal phases of flight and to deploy that capability incrementally. Along the way, there will be successes and there will be failures. We will learn from both and make significant progress in developing a layered Ballistic Missile Defense System.

Mr. Chairman, I have a short film, if the equipment works, to demonstrate the fact that we have achieved the ability, at least in the demonstration phase in some of our programs, to hit an incoming warhead very accurately. If I might, I would like to walk you through the low altitude, the medium altitude, and in the space realm that we are testing on Saturday, and the successes that we

have had. Now, to be sure, we have had failures, but I want to show you the continuity of hitting warheads directly with hit-to-kill technology and how that has developed over the past few years.

Chairman LEVIN. About how long will it take?

General KADISH. 3½ minutes.

Chairman LEVIN. That is fine. Thank you. [Video.]

[Copy of video retained in committee files.]

General KADISH. We will start out with this, a target launch for our Patriot 3. You can see the Patriot 3. This is in the atmosphere, hit-to-kill. There are no explosives on Patriot for theater ballistic missile (TBM) intercepts. You can see the Patriot maneuvering to get in the position to very accurately intercept a TBM warhead that is coming in, a short-range missile. Towards the terminal, you will see white smoke and you will see that hit. That is a direct hit, hit-to-kill, in the atmosphere with the Patriot.

The Patriot has missed only once in our test program, and we have had nine flights.

Now we move to THAAD, which is higher up in the atmosphere and into space. That was the target launch, THAAD missile taking off. To stay on the range, it has to do a maneuver, but it is very high acceleration. This program is now in development to fix some of the problems we had with it. You can see it climbing into altitude to intercept the warhead in outer space. Here is a depiction of the target, and the THAAD you can see maneuvering to hit it very accurately. There were no explosives. That is pure kinetic energy, hit-to-kill, body-to-body impact on the program.

That was high enough so that you could see this particular intercept from Albuquerque from over White Sands.

This is another view of it in more real-time.

Now an example of what we are going to try to do on Saturday. The first time we did a National Missile Defense or long-range missile defense intercept, this is the last frame that THAAD saw before it intercepted. You can see the image of that warhead getting bigger in the sights of that intercept vehicle.

This is a target launch out of Vandenberg into the South Pacific, 5,000 miles away. It occurred in October 1999, the first time we tried this. You can see the ranges are getting longer. This is the rise of the target into outer space. This is the interceptor at Kwajalein. Now, the intercept takes place over 140 miles into space, and you can see in a minute the two bodies coming together, from an infrared sensor.

This is a more real-time look at it from a better perspective. That is the warhead in there coming together.

Now, to be sure, we have major difficulties in making this type of technology work and work reliably and effectively. That is what this test program is designed to do, especially in the midcourse. We have had many failures in this process. However, it is an engineering challenge at this time.

Mr. Chairman, that concludes my opening remarks.

[The prepared statement of General Kadish follows:]

PREPARED STATEMENT BY LT. GEN. RONALD T. KADISH, USAF

Good morning, Mr. Chairman, members of the committee. It is a pleasure to appear before you today to present the Department of Defense's Fiscal Year 2002 Ballistic Missile Defense program and budget.

The fundamental objective of the BMD program is to develop the capability to defend the forces and territories of the United States, its allies, and friends against all classes of ballistic missile threats. The Department will develop technologies and deploy systems promising an effective, reliable, and affordable missile defense system. The RDT&E program is designed to develop effective systems over time by developing layered defenses that employ complementary sensors and weapons to engage threat targets in the boost, midcourse, and terminal phases of flight and to deploy that capability incrementally.

At the direction of the Secretary of Defense, we have developed a research, development and test program that focuses on missile defense as a single integrated BMD System, no longer differentiating between theater and National Missile Defense. This revised structure involves three basic thrusts. First, the new BMD program will build on the technical progress we have made to date by providing the funding required to develop and test selective elements of the current program fully.

Second, the new program will pursue a broad range of activities in order to aggressively evaluate and develop technologies for the integration of land-, sea-, air-, or space-based platforms to counter ballistic missiles in all phases of their flight. The new program will not cut corners. Rather, it is designed to pursue parallel development paths to improve the likelihood of achieving an effective, layered missile defense.

Third, the new testing program will incorporate a larger number of tests than in the past. They will employ more realistic scenarios and countermeasures. This will allow us to achieve greater confidence in our planning and development. Through this robust testing activity, we may discover opportunities to accelerate elements of the program based on their performance, and increase the overall credibility and capability of BMD Systems. This approach is designed to enable contingency use of the demonstrated BMD capabilities, if directed.

The goal of the BMD System is a layered defense that provides multiple engagement opportunities along the entire flight path of a ballistic missile. Over the next 3 to 5 years we will pursue parallel technical paths to reduce schedule and cost risk in the individual RDT&E efforts. We will explore and demonstrate kinetic and directed energy kill mechanisms for potential sea-, ground-, air-, and space-based operations to engage threat missiles in the boost, midcourse, and terminal phases of flight. In parallel, sensor suites and battle management and command and control (BMC²) will be developed to form the backbone of the BMD System.

But before I proceed to describe the new program in detail, I would like to make clear what this program does *not* do. It does not define a specific architecture. It does not commit to a procurement program for a full, layered defense. There is no commitment to specific dates for production and deployment other than for the lower tier terminal defense elements. It is not a rush to deploy untested systems; it is not a step back to an unfocused research program; and it is not a minor change to our previous program. Rather this program is a bold move to develop an effective, integrated layered defense that can be deployed as soon as possible against ballistic missiles of all ranges.

The new program is a major change in our approach to developing ballistic missile defense. The previous National Missile Defense Program, for example, was a high risk production and deployment program dependent for its success on an RDT&E effort that was underfunded but charged with developing a system that would operate at the outset with near perfection; and it was based on rigid military requirements. The new program is built around a fully-funded, rigorous RDT&E effort designed to demonstrate increasing capability over time through a robust, realistic testing program.

The objective of the new program is a layered defense to protect the United States, allies, friends, and deployed forces against ballistic missiles of all ranges. We will pursue this objective in the following way: First, we are recommending a broad, flexible approach to RDT&E that allows us to explore multiple development paths and to reinforce success based on the best technological approaches and the most advantageous basing modes in order to hedge against the inherent uncertainty of the ballistic missile defense challenge. Second, we are recommending an acquisition approach that is evolutionary, one that will allow us to field systems incrementally once they are proven through realistic testing. Third, rather than committing to a single architecture as we have done in the past, we will deploy over time different combinations of sensors and weapons consistent with our national strategic objectives.

We have designed the program so that, in an emergency and if directed, we might quickly deploy test assets to defend against a rapidly emerging threat. This has been done before with other military capabilities, both in the Gulf War and in Kosovo. But barring such an emergency, as the Deputy Secretary has stated, we do

not intend to deploy test assets until they are ready because such emergency deployments are disruptive, and can set back normal development programs by years.

LAYERED DEFENSE—EFFECTIVE AGAINST COUNTERMEASURES

The technical and operational challenges of intercepting ballistic missiles are unprecedented. While these challenges are significant, our testing accomplishments to date tell us that they are not insurmountable. Given the threats we expect to face, there is a premium on fielding a highly reliable and effective system. Reliability will be realized, in part, through redundancy in our system. Effectiveness is partly a function of the number of opportunities the system provides to intercept an in-flight missile and how early and how often those opportunities occur in the missile's flight. Because we need redundancy, we determined that whatever BMD Systems we deploy, they should allow multiple engagement opportunities in the boost, midcourse, and terminal phases of a ballistic missile's flight.

The boost phase is that part of flight when the ballistic missile's rocket motors are ignited and propel the entire missile system towards space. It lasts roughly 3 to 5 minutes for a long-range missile and as little as 1 to 2 minutes for a short-range missile. When the missile boosters are spent, the missile continues its ascent into what we call the midcourse part of flight (which lasts nominally 20 minutes for a long-range missile). In this stage of flight, a ballistic missile releases its payload warhead(s), submunitions, and/or penetration aids it carried into space. The missile enters what we call the terminal phase when the missile or the elements of its payload, for example, its warheads, reenter the atmosphere. This is a very short phase, lasting from a few minutes to less than a minute.

There are opportunities and challenges to engage a threat missile in each of these phases. The layered defense, or defense-in-depth, approach will increase the chances that the missile and its payload will be destroyed.

Intercepting a missile in the boost phase, for example, results in the defense of any target that the missile might be aimed at and can destroy a missile regardless of its design range. A midcourse intercept capability provides wide coverage of a region or regions, while a terminal defense protects a localized area. Intercepting a missile near its launch point is always preferable to intercepting that same missile closer to its target. When we add shot opportunities in the midcourse and terminal phases of flight to boost phase opportunities, we increase significantly the probability that we will be successful.

Another advantage of the layered approach is that it complicates an adversary's plans. Countermeasures, for example, will always be a challenge for the defense. But because countermeasures have to be tailored to the specific phase of a missile's flight, layered defenses pose major challenges to an aggressor.

RDT&E ACTIVITIES

The Fiscal Year 2002 Program speeds development of established technologies, enables robust testing and evaluation of systems that are more mature, and explores new missile defense concepts and technologies. I will address some of these activities in a moment. We plan to pursue multiple, parallel development paths to reduce the risk inherent in BMD engineering, with initiatives in each of the Boost, Midcourse, and Terminal Defense Segments of the BMD System. As part of our risk reduction activity, we will explore different technologies and paths. We will also pursue technologies that may be useful across multiple segments and employ multiple technologies to avoid single point failures in each segment.

We do not want to be in a situation, for example, to discover a fundamental design problem in our only Exoatmospheric Kill Vehicle (EKV), or in our only sea-based booster under development. That would amount to a single point failure that could cost us years in developing effective missile defenses, not to mention leaving America and our allies unnecessarily exposed. We must be agile in our engineering approaches to keep the BMD program on track and affordable.

This robust RDT&E program aims to demonstrate what does and does not work. Those activities showing the greatest promise will receive greater resource emphasis. Our progress will inform an annual high-level decisionmaking process that will steer the BMD program in the most promising direction, taking into account optimal approaches and the most reliable information on costs, allowing informed research, production, and deployment decisions.

This RDT&E approach also will minimize possible disruptive effects that the introduction of new technologies, development challenges, or changes in the threat otherwise could have on the BMD program and allow us to keep pressing forward along the most promising paths. We will pursue enough paths so that the scaling back of one effort will not undermine progress in other areas and the technological

advances we make even in failed efforts will be put to good use. This represents the best approach for pursuing promising capabilities that will allow us to get out in front and pace a dynamic ballistic missile threat.

The business of missile defense requires coping with a number of technological, developmental, acquisition, and threat uncertainties. For this reason, I cannot tell you today exactly what the system will look like 15, 10, or even 5 years from now. This system will take shape over time. We do not intend to lock ourselves into a highly stylized architecture based on either known technologies or hoped for advances in technology that will take a decade or more to complete. We intend to go beyond the conventional build-to-requirements acquisition process.

We have adopted a capability-based approach, which recognizes that changes will occur along two separate axes. On the one axis, the threat will evolve and change over time based on the emergence of new technologies, continued proliferation of missiles worldwide, and operational and technical adjustments by adversaries (including the introduction of countermeasures) to defeat our BMD System. On the other axis lie changes we will experience. These include improving technologies, incremental system enhancements, evolving views of system affordability, and out-year decisions expanding coverage, potentially including the territory and populations of our allies and friends.

The BMD System will feature a uniform battle management and command and control network and leverage, where possible, other Department communication channels to integrate elements of the BMD System. Because the system must act within minutes or even seconds to counter ballistic missiles, the information we receive on threats must be accurately received, interpreted, and acted upon rapidly. The information network must be seamless and allow information to be passed quickly and reliably among all the elements of the system.

Mobility in our sensor and interceptor platforms and the capability to do boost phase and/or midcourse phase intercept must be central features in our architecture if we are to provide effective territorial protection at home and abroad. Placing sensors forward, or closer to the target missile launch point, either on land, at sea, in the air, or in space, will expand the battle space, improve discrimination of the target complex, and increase engagement opportunities. We will develop complementary elements in different combinations in order to afford the system a high degree of synergism and effectiveness.

Specific system choices and timelines will take shape over the next few years through our capability-based, block approach. We will increase our capability over time through an evolutionary process as our technologies mature and are proven through testing. The block approach allows us to put our best, most capable technologies "in play" sooner than would otherwise be possible. We have organized the program with the aim of developing militarily useful capabilities in biannual blocks, starting as early as the 2004–2006 timeframe. These block capabilities could be deployed on an interim basis to meet an emergent threat, as an upgrade to an already deployed system, or to discourage a potential adversary from improving its ballistic missile capabilities.

Consequently, the CINCs and military services will be involved throughout the development process so that with each block we move steadily forward towards systems with ever increasing military utility that complement other operational capabilities and that minimize life cycle cost.

TESTING

We have restructured the BMD program to facilitate success through rigorous, robust, and realistic testing. To ensure rigor our BMD testing philosophy recognizes that we must have an integrated, phased test program that comprehensively covers all aspects of testing; and our budget submission reflects our investment in the requisite test infrastructure to support this. To enable more robust testing we will invest in additional test articles and targets. The test bed we propose constructing will enhance our ability to test the full range of missile defense capabilities in realistic configurations and scenarios. Let me describe our approach to testing and discuss broadly what we are undertaking in fiscal year 2002.

Our BMD developmental testing entails conceptual prototype development, assesses the attainment of technical performance parameters, generates data on risk, supports risk mitigation, and provides empirical data to validate models and simulations. Testing of systems, subsystems, and components, especially early in the developmental cycle, helps us to achieve two fundamental objectives: (1) determine performance capabilities, and (2) identify potential design problems to support timely changes. Later testing will demonstrate the broad range of effectiveness and suitability of missile defenses in increasingly realistic environments.

Our test philosophy is to add, step-by-step over time, complexity such as countermeasures and operations in increasingly stressful environments. This approach allows us to make timely assessments of the most critical design risk areas. It is a walk-before-you-run, learn-as-you-go development approach. These testing activities provide critical information that reduces developmental risk and improves our confidence that a capability under development is progressing as intended.

Given the number of technical challenges shared among the many elements of the BMD System, we will conduct a number of program-wide tests, experiments, and measurement projects each year to achieve our program-wide objectives. System interoperability and critical measurements flight tests and ground experiments will be conducted to support development of BMD System operating concepts, reduce development risks, and assess BMD System integration and interoperability. Program-wide collection and measurement needs will be met by phenomenology measurements, countermeasure characterizations, and analysis of lethality, kill assessment, and discrimination. International cooperative test and evaluation activities could become an important part of our program.

Each test range currently in use is equipped with precision instrumentation sensors (radar and optical), telemetry capabilities, and flight and range safety systems. Additionally, BMDO deploys mobile airborne sensors. Core supporting ranges include both short- and long-range test facilities with multiple launch sites, primarily in New Mexico and over the Pacific Ocean. These collection capabilities are a critical part of our program. In fiscal year 2002, we will be engaged in a number of activities to develop and upgrade the test range infrastructure we require.

The new program will feature range improvements for boost segment and system level testing, and will allow us to increase the tempo of our testing operations. Existing ground facilities will be upgraded for testing of Boost Segment elements, advanced sensors, counter-countermeasures, and nuclear weapons effects. Airborne instrumentation platforms will be upgraded, and modeling and simulation software having system-level and program-wide application will be developed.

Ground test facility development and enhancement will help us to improve sensor testing, strengthen our end-to-end test capability, and undertake tests using scenarios we cannot duplicate in our flight-testing, such as nuclear weapons effects testing. Facilities for program-wide interoperability ground tests must be upgraded to be capable of both analyzing yesterday's flight test data and predicting tomorrow's expected system performance.

With our more robust test program we will increase the number of tests and add tests of different technologies and basing modes. To meet the challenges of missile defense development we must upgrade our capabilities to test with flexibility over greater distances. Test scenarios must accommodate multiple intercepts occurring nearly simultaneously at realistic intercept geometries. Upgrades will be required in our launch facilities, flight hardware, and range tracking and collection assets.

In fiscal year 2002 we will develop an inventory of targets and initiate procurement of additional test hardware to support a more aggressive test program. We must have quicker reaction in our targets program in order to accommodate changes in threat knowledge and to incorporate countermeasures. The BMD program will fund development of new threat-credible ballistic missile targets and countermeasures for all defense segment development activities, risk reduction flights, and comprehensive target system support, to include direct target costs and launch operations.

Challenges we face in this area include development of new targets for boost segment testing, proper incorporation of countermeasures, and overcoming a dwindling supply of target hardware, particularly hardware incorporating countermeasures. The objective is to ensure an adequate supply of target boosters, reentry vehicles, and countermeasures to prevent major delays in development schedules resulting from a shortage of these major target components. We need to be able to test more and more often, and this requires that we have the test articles on hand and ready for use. Larger quantities of hardware also will help us overcome lengthy delays caused by, for example, a pre-launch problem with a target booster.

As I mentioned earlier, we will increase testing of alternative technologies, especially in the medium and high-risk areas of development. We must be hardware rich if we are to have a robust testing program and if we are to avoid single point failures in any of our development efforts.

Among the challenges that faced the previous NMD program was overcoming flight test restrictions on trajectories, impact areas, and debris in space in order to test overall system performance limits. The range we have been using between Vandenberg Air Force Base in California and Kwajalein Missile Range, while useful for developmental testing, lacks realism for tests of BMD interceptors and sensors.

The amended budget request contributes significantly to the development of a BMD test bed, which will be used initially to prove out the midcourse capabilities. That test bed will expand test boundaries and develop and enhance test infrastructure and will provide for more operationally realistic testing. Over time the test bed will expand to include weapons and sensor capabilities to improve all missile defense capabilities as they are made available.

The integrated test bed will be oriented in the Pacific region and extend many hundreds of miles from the Marshall Islands in the South Pacific to Alaska. It will allow more realistic flight-testing of capabilities in the Boost, Midcourse, and Terminal Defense Segments.

The new test bed would make use of early warning radars at Beale Air Force Base and Cobra Dane at Shemya Island, and use the Kodiak Launch Facility in Alaska to launch targets and interceptors. The test bed would continue our practice of integrating early warning cueing information from Defense Support Program satellites and leveraging a battle management system operated out of Colorado Springs, Colorado. The test bed also will include up to five ground-based silos at Fort Greely, Alaska. We anticipate a prototype ground support capability, to include launch facilities, sensors, and networked communications, will be developed in fiscal year 2002 and built in fiscal year 2003. We will initiate construction of an interceptor integration facility in fiscal year 2002 to support a wide range of interceptor needs for testing.

This test bed will allow us to test more than one missile defense segment at a time and exploit multiple shot opportunities so that we can demonstrate the viability of the layered defense concept. The test bed will provide a realistic environment to test different missile defense capabilities under varying and stressing conditions. It will also help us prove out construction, transportation, and logistics concepts we will need to clarify as we execute deployment decisions.

If directed, the BMD test bed also could provide a basis for a contingency defensive capability if the security environment warrants.

BMD PROGRAM MANAGEMENT

We must deviate from the standard acquisition process and recognize the unprecedented technical challenges we are facing. We do not have major defense acquisition programs in the fiscal year 2002 budget. We do not have program activities with traditional fixed milestones and clearly marked phases showing the road to production.

The new approach to BMD development features more streamlined, flexible management through comprehensive and iterative reviews. We will establish yearly decision points to determine the status of the available technologies and concept evaluations in order to be in a position to accelerate, modify, truncate, or terminate our efforts in a particular area. This comprehensive annual review process will also help us make decisions to shape the evolving systems and allocate resources to optimally support them. This decision process will allow for: (1) more complete understanding of current technologies and the evolving capabilities; (2) evaluation of innovative concepts; (3) development of competing technologies to reduce cost, schedule, and performance risks; and (4) better estimation of complete costs for making informed decisions concerning system capability, production, and deployment. We believe that full annual evaluations of our program activities and demonstrated technical achievements will build confidence for decision makers.

This program is designed to seek opportunities to provide the most effective and efficient missile defense by exploiting advances in technology as they emerge and by making timely decisions to direct individual development activities. We will make adjustments as we learn what we can and cannot do technically and as we make the tough calls on selecting among the promising technologies to create the best mix of missile defense capabilities across the threat missile flight envelope.

As missile defense capabilities mature, we envision transferring the individual elements to the military department for production and procurement as part of a standard acquisition program. This approach will ensure that the military department can operate these capabilities effectively and reliably.

PROGRAM ELEMENTS AND ACTIVITIES

To manage and account for program resources, BMDO plans a configuration of nine Program Elements (PE): BMD System; Terminal, Midcourse, and Boost Defense Segments; Sensors; Technology; Pentagon Reservation Maintenance Reserve Fund; Small Business Innovative Research; and Headquarters Management. This PE structure supports the revised BMD program goals by aligning activities and funding with the program's internal technical focus. It also provides the flexibility

to mitigate, through internal adjustment, unforeseen consequences and risks in budget and schedule. The following table illustrates the PE structure.

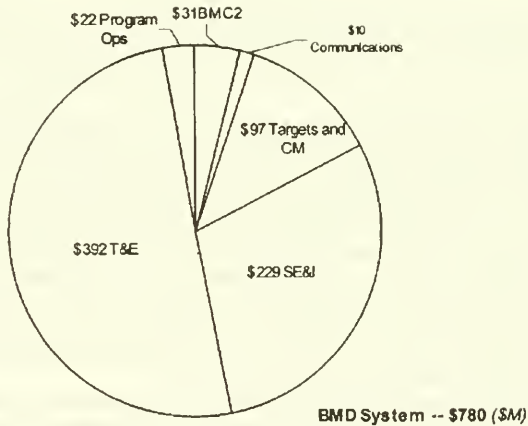
(TY \$ In Millions)

Program Element Title	FY 02
BMD System	779,584
Terminal Defense Segment	988,180
Midcourse Defense Segment	3,940,534
Boost Defense Segment	685,363
Sensors	495,600
Technology	112,890
Pentagon Reservation Maintenance Reserve Fund	6,571
IIQ Management	27,758
Small Business Innovative Research*	0,000
Total RDT&E	7,036,480
BMD System MILCON	7,549
Terminal Defense Segment MILCON	0,750
Total MILCON	8,299
Total Program	7,044,779

* Funds for this PE are allocated immediately following the annual appropriation; the amount is based on internal redistribution of RDT&E funding (2.65% of extramural RDT&E). Total program appropriation does not change

Program Element Descriptions

BMD System



The BMD System Program Element allocates the resources required for the overarching conduct and integration of the multi-layered BMD System. The BMD System PE comprises five primary projects: Battle Management, Command and Control (BMC²); Communications; Targets and Countermeasures; System Engineering and Integration (SE&I); and Test and Evaluation (T&E). System-level activities involve integrating the Boost, Midcourse, Terminal, and Sensors segments into a single and congruous missile defense system; this PE also includes management efforts to preserve and promote architectural consistency, interoperability, and integration of PAC-3, MEADS, and Navy Area systems within the overarching BMD mission. Our amended request of \$780 million for these activities represents an increase of \$253 million over fiscal year 2001 enacted funding, and \$251 million over the initial fiscal year 2002 budget submission.

Our evolutionary acquisition process will increase the BMD System capabilities over time in 2 year increments. Each BMD System block will comprise multiple weapon and sensor elements. The BMC² and Communications project funding is for

developing and integrating the command and control and communications for the BMD System. The BMC² project includes the development and allocation of BMC² specifications to ensure the weapons and sensor system products are fully interoperable with each other and with external systems, providing optimum flexibility to the warfighter. To this end, a Ballistic Missile Defense Integration Center will be established at BMDO's Joint National Test Facility.

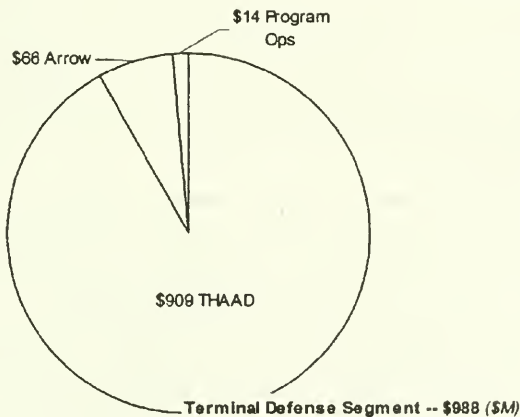
The Communications project consolidates and refines BMD System-wide communication systems to allow components to exchange data and to permit command and control orders to be transmitted to the weapons and sensor systems.

The Targets and Countermeasures project funding provides threat-credible ballistic missile targets, countermeasures, and target system support. This project will provide new target and countermeasure development, risk reduction flights, and target characterization.

As the central engineering component within BMDO, the Systems Engineering and Integration (SE&I) project provides the overall system engineering development and integration of the BMD System. The SE&I mission is to define and manage the layered BMD System, providing the collaborative, layered, and detailed systems engineering and integration required across the entire spectrum of BMD warfighter capabilities.

Lastly, the Test and Evaluation project provides consolidated system-wide Test and Evaluation capabilities and resources required to allow for cohesive facilitation, management, and execution of test activities. Test and Evaluation efforts include the development, operation, maintenance, and modernization of the BMD program-wide Test and Evaluation infrastructure. The T&E program also addresses cross-cutting issues related to BMD System lethality, discrimination, and other T&E derived mission critical functions. Finally, the T&E program conducts system integration tests for the entire BMD System and will validate performance of each block. Test & Evaluation activities are grouped in terms of Program Wide Test & Evaluation; Test Support of facilities, ranges, sensors, and test instrumentation; modeling and simulation; and facilities, siting, and environmental efforts.

Terminal Defense Segment



The Terminal Defense Segment (TDS) allocates resources to support development and selective upgrades of defensive capabilities that engage and negate ballistic missiles in the terminal phase of their trajectory. The primary projects under this PE are the Theater High Altitude Area Defense (THAAD) system and the Israeli Arrow Deployability Program (ADP). Related activities include the Israeli Test Bed (ITB), Arrow System Improvement Program (ASIP), and studies via the Israeli Systems Architecture and Integration (ISA&I) effort that assess the Arrow performance relative to both existing and emerging threats. Our amended request of \$988 million represents an increase of \$212 million over fiscal year 2001 enacted funding, and an increase of \$224 million over the initial fiscal year 2002 budget submission. Note: The PAC-3, MEADS, and Navy Area programs are funded within their respective service accounts.

The mission of the THAAD System is to defend against short- and medium-range ballistic missiles at significant distances from the intended target and at high altitudes. THAAD will protect U.S. and allied Armed Forces, broadly dispersed assets, and population centers against missile attacks. This evolutionary program is structured to demonstrate capability in Block 2004, with planned improvements based on upgraded seekers, ground support equipment, and discrimination software. Current efforts are addressing component and system performance, producibility, and supportability. A robust ground-testing program will precede flight testing, currently planned for fiscal year 2004. The budget adds resources to accelerate acquisition of a THAAD radar and to buy more test missiles in order to capitalize on early flight test successes should our disciplined development program prove effective. The Arrow Weapon System (AWS) (developed jointly by the U.S. and Israel) provides Israel a capability to defend against short- and medium-range ballistic missiles and helps ensure U.S. freedom of action in future contingencies. Arrow also provides protection against ballistic missile attacks for U.S. forces deployed in the region. The successful Arrow intercept test on September 14, 2000, resulted in Israel declaring the system operational in October 2000. The Arrow Deployability Program (ADP) also supports Israel's acquisition of a third Arrow battery and Arrow's interoperability with U.S. TMD systems. Interoperability will be achieved via a common communication architecture utilizing the Link-16. An interoperability test was completed in January 2001 using the Theater Missile Defense System Exerciser (TMDSE) that validated that the Arrow Weapon System is interoperable and can exchange surveillance and missile track cueing data with U.S. Patriot and Aegis missile defense systems. The Arrow System Improvement Program (ASIP) will include both technical cooperation to improve the performance of the AWS and a cooperative test and evaluation program to validate the improved AWS performance. We added \$20 million in our amended budget specifically for additional flight testing and development of additional production capacity for the Arrow missile.

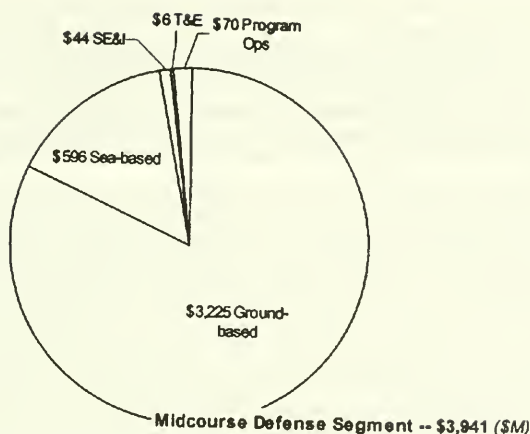
Equally important to the integrated BMD System are the lower tier programs that are being transferred to the military departments. We have had significant success with the PAC-3, and interceptor missiles will be delivered to training battalions this year. PAC-3 system will provide critical operational capability to defend our forward-deployed forces, allies, and friends. The system is designed to counter enemy defense suppression tactics that may include tactical ballistic missiles, anti-radiation missiles, and aircraft employing advanced countermeasures and low radar cross-section. The PAC-3 technology has a proven record of hit-to-kill success. We are now 7-for-8 in body-to-body intercepts against ballistic missile targets. PAC-3 missile technology also accomplished 4-for-4 body-to-body intercepts against cruise missiles and air-breathing threats. Recent successes included multiple simultaneous engagements of both short-range ballistic missiles and cruise missiles using PAC-2 and PAC-3 interceptors.

Although the Navy Area Program has experienced technical, cost and schedule challenges we are now at a point where we can execute a rigorous set of flight tests and likely achieve a capability in the middle of this decade. A fly-by test is anticipated for early 2002, to be followed by a series of intercept flight-tests. At-sea testing is expected to begin in late 2002/early 2003. Navy Area has been positioned to undertake initial at-sea tests using, Aegis "LINEBACKER" ships.

With the German Parliament funding recently made available to continue the trilateral MEADS activity, that program is about to embark on a 3-year risk reduction effort. MEADS will use the PAC-3, which has already begun production, as its interceptor. Once deployed, MEADS will improve tactical mobility and strategic deployability over comparable missile systems and provide robust, 360-degree protection for maneuvering forces and other critical forward-deployed assets against short- and medium-range missiles.

These systems have been in development for many years and Patriot and Navy Area are approaching procurement and deployment decisions. For this reason, and in compliance with our program philosophy to have BMDO do RDT&E and the military departments do procurement, and to support the military departments' air defense mission, the Department is transferring to the respective services the responsibility for execution and management of PAC-3, Navy Area, and MEADS.

Midcourse Defense Segment



The Midcourse Defense Segment (MDS) develops increasingly robust capabilities for countering ballistic missiles in the midcourse stage of flight. The MDS will develop and test multiple technologies to provide credible capabilities against this threat to operate in this segment of flight. The MDS program of work is divided into multiple elements including Ground-Based Midcourse System, and Sea-Based Midcourse System, the successors to the National Missile Defense and Navy Theater Wide programs, segment Systems Engineering and Integration, and segment Test and Evaluation. Our amended request of \$3,941 million represents an increase of \$1,455 million over fiscal year 2001 enacted funds, and an increase of \$1,237 million over the fiscal year 2002 initial budget submission.

Under the previous BMD program, we had under development only one system that could provide a midcourse intercept capability for defeating ICBMs. We made significant progress in the National Missile Defense (NMD) program and brought system development to the point where an independent review team led by retired Air Force General Larry Welch concluded that, despite some challenges, the technical capability was in hand to develop and field the limited system to meet the projected threat. We were pursuing a highly concurrent development and production program focused on a 2005 deployment. While the NMD testing program experienced delays in development and testing, our analysis last year showed that ground and flight tests to date have demonstrated about 93 percent of the system's critical engagement functions and have shown the ability to integrate the system elements.

The revised Ground-Based Midcourse System has three objectives: (1) to develop and demonstrate an integrated system capable of countering known and expected threats; (2) to provide an integrated test bed that provides realistic tests and reliable data for further system development; and (3) to create a development path allowing for an early capability based on success in testing. During its initial phase, the program will develop an integrated system, further demonstrate a "hit-to-kill" capability, and prepare for the RDT&E test bed capability and subsequent blocks. Each block will develop capability against increasing threat complexity.

Within the MDS, the bulk of the resources are designed to build and sustain an operationally realistic test architecture that represents the envisioned operational capability. We plan to have an RDT&E ground-based test bed available in the 2004–2006 time frame. As designed, this test bed will expand to enhance overall test infrastructure and system maturation, although its initial development will occur within the midcourse segment. Over time the test bed will expand to include weapons and sensor capabilities from throughout the BMD System when they become available.

The test bed will consist of up to five ground-based silos with an upgraded Cobra Dane radar; associated command and control and launch facilities; other sensors; and networked communications to support robust testing with credible targets, scenarios, and countermeasures. This project includes four flight tests in fiscal year 2002. Moreover, upon availability, the test bed could incorporate air launched targets, thereby providing geographically realistic scenarios and improving overall testing realism. Throughout, enhancements will be made to both the Fort Greely and

Kodiak Island test facilities, improving both target and interceptor launch capabilities.

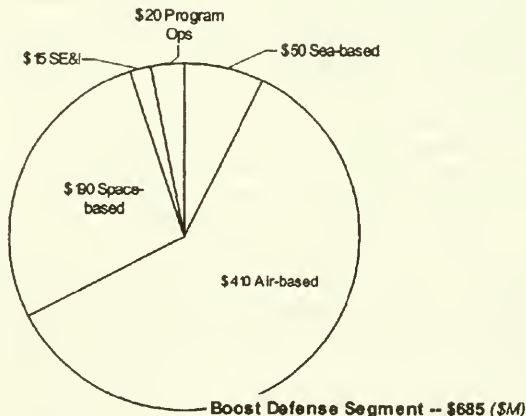
This approach might provide a near-term option to employ the test facilities—radars, C², and interceptor missiles at Fort Greely and Kodiak—in an operational mode. Its use in this mode could provide an interim capability to meet an emergent threat. This interim capability could subsequently be upgraded through technical improvements, replaced by deployment of production-quality radars, C², and interceptors as described below or supplemented with a Sea-Based Midcourse System, described below.

The Sea-Based Midcourse System is intended to intercept hostile missiles in the ascent phase of midcourse flight, which when accompanied by a ground-based system, provides a complete midcourse layer. By engaging missiles in early ascent, sea-based systems also offer the opportunity to reduce the overall BMD System's susceptibility to countermeasures. The Sea-Based Midcourse System will build upon technologies in the existing Aegis Weapon System and the Standard Missile infrastructures and will be used against short and medium-range threats. Funding in fiscal year 2002 offers the ability to continue testing and enables a potential contingency sea-based midcourse capability that can grant limited defense to U.S. and allied deployed forces as an element of the BMD System Block 2004. To support this effort five flight tests of the sea-based midcourse system are planned in fiscal year 2002. Funding also begins concept development and risk reduction work for advanced capability blocks to include more robust capability against intermediate and long-range threats to complement ground-based midcourse capabilities later this decade.

The United States and Japan signed a memorandum of understanding in August 1999 to conduct a 2-year cooperative project to conduct systems engineering and to design four advanced missile components for possible integration into an improved version of the SM-3 interceptor. This project leverages the established and demonstrated industrial and engineering strengths of Japan and allows a significant degree of cost-sharing.

Other segment activities include Systems Engineering and Integration (SE&I), Test and Evaluation (T&E), and Program Operations. SE&I funding will allow for further risk reduction activities and counter-countermeasure development and will begin a complementary kill vehicle development which could be common to both ground- and sea-based interceptors. T&E funding starts a new target booster development that will allow for testing against more realistic targets.

Boost Defense Segment



The mission of the Boost Defense Segment (BDS) is to define and develop boost phase intercept (BPI) missile defense capabilities. Our amended request of \$685 million for the Boost Defense Program represents an increase of \$313 million over the fiscal year 2001 enacted funding, and an increase of \$384 million over the initial fiscal year 2002 budget submission.

The capabilities defined and developed in the BDS will progressively reduce the "safe havens" available to a hostile state. A "safe haven," is formed by geographic and time constraints associated with BPI. It is the region of a state from which it

can launch a missile safely out of range of a potential boost phase intercept. To engage ballistic missiles in this phase, quick reaction times, high confidence decision-making, and multiple engagement capabilities are needed. The development of higher power lasers and faster interceptor capabilities are required to reduce the size of safe havens, whereas development of viable space-based systems could potentially eliminate them entirely. Thus, resources have been allocated to develop both kinetic and directed energy capabilities in an effort to provide options for multiple engagement opportunities and basing modes to address a variety of timing and geographic constraints.

Successful BDS operational concepts could be fully integrated with midcourse and terminal elements in the overall BMD System. In accordance with the overall BMD acquisition strategy, BDS will employ multiple paths and acquisition methodologies to deliver initial capability blocks as soon as practical, and upgrade the initial capabilities over time. From information gained following this approach, BMDO will evaluate the most promising projects to provide a basis for an architecture decision between 2003 and 2005.

There are four principal objectives for the BDS. First, it will seek to demonstrate and make available the Airborne Laser (ABL) for a contingency capability in Block 2004 with a path to an initial capability in Block 2008. Second, it will define and evolve space-based and sea-based kinetic energy Boost Phase Intercept (BPI) concepts in the next 2 to 4 years, supporting a product line development decision in 2003–2005. This effort will include concept definition, risk reduction activities, and proof-of-concept demonstrations. For example, the sea-based boost program is considering a high-speed, high-acceleration booster coupled with a boost kill vehicle. This same booster will be evaluated (with a different kill vehicle) for sea-based midcourse roles. Third, the BDS will execute a proof-of-concept Space-Based Interceptor Experiment (SBX). Fourth, the BDS will also continue Space-Based Laser (SBL) risk reduction on a path to a proof-of-concept SBL Integrated Flight Experiment (SBL-IFX) in 2012. At appropriate times, BMDO will insert mature system concepts and technologies into product line development and deployment. Planned tests within the Boost Segment include a ground test of the ABL project and a ground test of the Sea-Based Boost concept in 2002.

Kinetic Energy Concepts

Little has been done in this area in recent years. We intend to address operational concept development and technical risk reduction to produce experiments and systems to deliver demonstrations in the 2003–2006 timeframe. Kinetic boost phase intercept is a challenge because the threat missile must be detected and confirmed within a few seconds of launch. It then becomes a race between an accelerating ballistic missile and the interceptor in which the threat missile has had a head start. Another technical challenge is designing a kill vehicle that can detect and track the target following missile-staging events and then impact the missile in the presence of a brilliant plume.

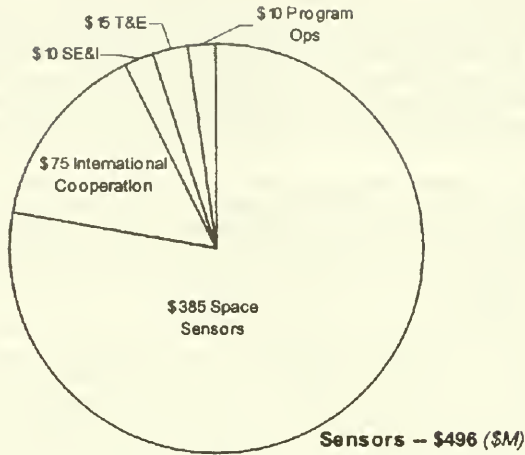
The money requested in fiscal year 2002 will allow us to begin risk reduction activities to resolve critical technological risks associated with candidate boost systems and the development of a concept of operations through war-gaming and other planning activities. We are considering a sea-based boost activity to develop a high-speed, high-acceleration booster coupled with a boost kill vehicle. This activity will simultaneously support a proof-of-concept Space-Based Experiment (SBX) using a space-based kinetic energy kill vehicle.

Directed-Energy Capabilities

The two primary programs in this area are the Airborne Laser (ABL) and Space-Based Laser, now transferred to BMDO. The Air Force ABL program has been focused on short- and medium-range threats. We are taking deliberate steps to prepare ABL for a strategic defense role as well. With onboard sensors, each ABL aircraft will conduct long-range, wide-area surveillance of regions from which threat missiles might launch. The fiscal year 2002 budget request will allow us to conduct an initial flight test of ABL and plan for a lethal demonstration in 2003.

The budget request will enable BMDO to continue SBL risk reduction work. Near-term SBL activity will focus on ground-based efforts to develop and demonstrate the component and subsystem technologies required for an operational space-based laser system and the design and development of an Integrated Flight Experiment vehicle that is scheduled to be tested in space in 2012. The SBL project builds on many years of previous development and is based on prudent reduction of technical risk as early as possible in the design process.

Sensors

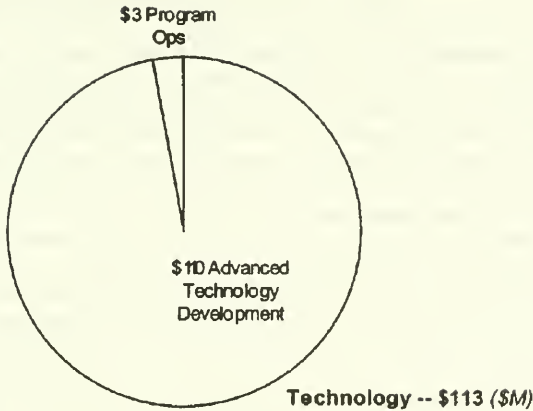


Sensors developed in this segment will have multi-mission capabilities intended to enhance detection of and provide critical tracking information for ballistic missiles in all phases of flight. This PE funds the Block 2010 SBIRS-Low sensor satellite constellation, and the Russian-American Observation Satellites (RAMOS) Program, as well as emergent technologies and test and evaluation activities. In addition, resources are provided to further concept development and risk reduction efforts. Our amended budget request of \$496 million represents an increase of \$221 million over the fiscal year 2001 enacted funding, and an increase of \$113 million over the initial fiscal year 2002 budget submission.

SBIRS-Low (transferred from the Air Force) will incorporate new technologies to enhance detection; improve reporting of Intercontinental Ballistic Missile (ICBM), Sea-Launched Ballistic Missile (SLBM) and tactical ballistic missiles; and provide critical midcourse tracking and discrimination data for BMD. SBIRS-Low, in conjunction with SBIRS-High (developed by the Air Force), form the SBIRS system, which will consist of satellites in Geosynchronous Orbits (GEO), Highly Elliptical Orbits (HEO) and Low Earth Orbits (LEO) and an integrated centralized ground station serving all SBIRS space elements and Defense Support Program (DSP) satellites.

The Russian-American Observation Satellites (RAMOS) Program is an innovative U.S.-Russian space-based remote sensor research and development program addressing ballistic missile defense and national security directives. This program engages Russian developers of early warning satellites in the joint definition and execution of aircraft and space experiments.

Technology



The Technology Segment will develop components, subsystems and new concepts needed to keep pace with the evolving ballistic missile threat. The primary focus of the Technology Segment is the development of sensors and weapons for future platforms that can complement today's missile defense capabilities. Investments will maintain a balance between providing improvements in current acquisition programs and demonstrating the enabling technology for new concepts. Our amended request of \$113 million represents a decrease of \$74 million relative to the fiscal year 2001 enacted funding (and congressional adds), and a \$41 million increase over the initial fiscal year 2002 budget submission.

The technology program is divided into four thrust areas: (1) terminal missile defense, (2) midcourse counter-countermeasures, (3) boost phase intercepts, and (4) global defense. Specific projects include the development of a doppler radar to be used in a missile seeker, the demonstration of active and interactive midcourse discrimination techniques, the design and development of miniature kill vehicles for boost and midcourse application, and the development and/or testing of space relay mirrors for laser tracking systems. In addition to thrust area projects, investments are made in technology at the component level to improve the state-of-the-art in radars, infrared sensors, lasers, optics, propulsion, wide band gap materials, and photonic devices.

In closing, the Ballistic Missile Defense System Strategy balances significant engineering, management, schedule and cost challenges. It also provides for a robust RDT&E program with rigorous testing. Your support will be critical to our success.

Thank you, Mr. Chairman. I would be happy to answer any questions you and the members of the committee might have.

Chairman LEVIN. Thank you both.

The issue that this Nation is going to have to face is not whether North Korea is trying to develop missile capability, but whether our response to that will make us less secure or more secure. That is the issue.

The moral obligation that the President has and that Congress has is to make us more secure. If it comes down to the breach of a treaty, which leads to a Russian and Chinese response to increase the number of weapons they otherwise would have and to increase the amount of nuclear material on Russian soil particularly, and speed up the development of a nuclear program in China, this could lead to the greater possibility that terrorists could get their hands on a nuclear weapon. This increases the terrorist threat because of the greater access to nuclear material, the greater number of nuclear weapons in this world. If that is the response—and that very well could be the response—we then have

a new arms race on our hands, a new Cold War on our hands and a greater proliferation threat on our hands.

This is the reason for the original ABM Treaty. Countries are going to respond. As one of the experts put it back then, one side's quest for safety can heighten the other side's insecurity. That is the issue. Is our quest for safety in this particular way going to increase Russian and Chinese insecurity? You hope it does not. We would all hope it does not. You say it should not. We would all feel it should not. But the question is, will it?

Does that mean we give anybody a veto? Of course not. Nobody has a veto. But does that mean that the response of other countries, nuclear powers with the capability of increasing their capability, MIRVing their weapons, of transferring countermeasures and decoys to other countries and developing themselves—is that response relevant to what we do? It seems to me it surely is relevant. If it comes down to a unilateral deployment in violation of a treaty, we need to weigh that response and decide whether or not we will be left more or less secure by a unilateral deployment.

That is a particularly difficult question, it seems to me, in light of the fact that we have been informed over and over again by our intelligence sources that the more likely means of delivery of a weapon of mass destruction is not a missile. It is not a ballistic missile. It is a truck or a suitcase or a ship. Do we then take action to defend unilaterally in violation of a treaty against the least likely means of delivery with the likelihood of increasing a proliferation threat when there is another means of delivery more likely, cheaper, more accurate, stealthier?

Those are the questions which this administration I believe has not given adequate attention to. We will be spending a lot of time on those questions at a later hearing. Obviously, today people will comment on that, and you already have.

What I want to focus on today with my time has to do with the testing, which is now being requested, the budgeting that you are requesting.

For the first time we are told in your statement that the tests or activities that you are seeking funding for are likely to bump up against the ABM Treaty in months rather than years. Now, as my good friend Senator Warner said in his opening statement, when the press reported that this morning, we were wondering whether that was just sort of snippets from various comments put together by the press. Well, it is not. What we have here this morning for the first time is the administration telling us that, if we fund this budget request, the likelihood is that this treaty will be violated in months not years.

We have been told that our allies and the Russians have been informed of that recently. That is what the press was told yesterday. That is what we have been told, that the Russians and the allies have been informed that the activities that would be budgeted for 2002 are likely to bump up against and be in conflict with the ABM Treaty in months not years.

Now, we were told by General Kadish just 3 weeks ago that there would be no treaty violation in 2002 based on the recommendations that he had made. We were briefed on that, and that is what you told us, General, 3 weeks ago.

Something has changed in the last 3 weeks.

You obviously hope that these tests proceed well. You want them to proceed well, these tests that we budget. Therefore, if it is likely that they will bump up against the treaty in months not years, that means that you are telling us that if we adopt this budget that you have requested, that this treaty, if not amended—everybody hopes there will be an amendment, but if it is not amended with the Russians—that this treaty would be violated unless we withdrew from it during fiscal year 2002. Is that correct?

Secretary WOLFOWITZ. There is a very important measure of difference. I used in my testimony the phrase “bump up.” I think in the talking points we used with our allies, we used the phrase “encounter.” I noticed the newspaper uses the phrase “conflict,” and that is a very different—that presumes you have already made the legal judgment.

As I tried to lay out very clearly in my testimony, at this early stage, the legal issues are just loaded with ambiguities. The central ones in the examples I mentioned have to do with the question of whether the development of a test bed, which would clearly be legal under the treaty, becomes illegal if you harbor the intention or the plan or the possibility of turning that test bed into an operational capability. It is going to take a great deal of legal argument to decide what the answer is to that.

The other issues that I described involve issues essentially of testing non-ABM radars in so-called ABM modes or essentially issues that were argued throughout the period of the treaty because we had one interpretation and the Russians had another. The lawyers are going to have to come up with some definitive judgments as to which of those interpretations apply.

We are in a gray area, Mr. Chairman, and that is why I use a fuzzy phrase like “bump up” rather than a very clear-cut phrase like “conflict.” As I said in my testimony, if we come to a judgment that it conflicts and we have not yet revised the ABM Treaty, then we either can withdraw from the ABM Treaty, not violate it—we are not going to violate it. We are legally allowed under the treaty to give 6 months’ notice of withdrawal—or we can scale back our program and take out some tests that would otherwise be useful or stop doing something that would give us both the test and operational capability.

Chairman LEVIN. Mr. Secretary, I must tell you the administration handed out a document to the press yesterday. The press asked us to comment on it. Can we give them a copy of this?

I am just going to read this. This is what the press quoted. You can say there is a big difference between conflict and bump up against. OK. The administration said conflict in this document. The document is titled, “The Administration’s Principal Themes on Missile Defense: Questions and Answers.” It says, “Moreover and again as we have told both allies and the Russians, while we do not know precisely when our programs will come into conflict with the ABM Treaty in the future, the timing is likely to be measured in months not years.” Those are your words. Those are the administration’s words. Now you are telling us you did not mean conflict, you mean bump up.

You cannot tell us whether there is anything in this budget which, if everything works well, would lead to activities which conflict with the ABM Treaty? You do not know?

Secretary WOLFOWITZ. I can tell you—and I have identified them—that there are activities in this budget that will raise issues of treaty interpretation, and we have not yet come to a resolution of those issues.

Chairman LEVIN. You have a Compliance Review Group, do you not?

Secretary WOLFOWITZ. Which is working on these issues as we speak.

Chairman LEVIN. Have they decided whether they would conflict or not?

Secretary WOLFOWITZ. I do not believe they have.

Chairman LEVIN. When will we know that?

Secretary WOLFOWITZ. At least 6 months before we proceed with these.

Chairman LEVIN. We are not going to know that before you are asking us to vote on this budget, whether your own Compliance Review Group thinks that the activities that you are asking us to fund are in conflict with the ABM Treaty, which could lead to all kinds of ramifications for the world? We are not going to have that assessment from your Compliance Review Group before you are asking us to approve a budget? Is that what you are telling us this morning?

Secretary WOLFOWITZ. I am telling you, Mr. Chairman, that we do not have that assessment now. We will get it as soon as we can, and we will certainly get it well in advance of 6 months of the event.

Chairman LEVIN. The whole purpose of that group, by the way, is to tell us whether or not an activity violates a treaty. A pretty significant judgment. You are proceeding without it, and you are asking us to proceed without it. I hope we do not.

Senator Warner.

Senator WARNER. I opened the comments that I provided at this hearing with the statement that it is really my belief that Congress will work constructively as a partner in a calm manner to achieve the necessary defenses that this Nation must have.

Now, I also point out that we are going to talk about different interpretations of different statements, but clearly on page 7, your last sentence, "I can assure you that the President will adhere to the requirements of the treaty to conduct the proper notifications as we go forward"—in other words, time and time again our President has indicated that he is going to follow a path of consultation, then negotiation. I think that should be sufficient reassurance to Congress that we can work as full partners.

Now, much was said rather loosely about unilateral withdrawal. I think the President had no alternative but to lay down very clearly the threat against this country, his determination as the constitutional leader to deal with that threat technologically, to the extent that we can, but at the same time, leave no doubt that if consultations and subsequent negotiations do not result in a framework, we have no alternative but to exercise the right under the treaty to withdraw.

Otherwise, it is my judgment—and I ask the question to you, Secretary Wolfowitz—we put squarely in the hands of the Russians a veto. Am I not correct in that assumption?

Secretary WOLFOWITZ. I believe that is what we would be doing and then we would, in effect, be making the judgment that the kinds of dangers Chairman Levin has talked about and which I believe are very manageable are much more serious than what I believe the rather unmanageable proliferation of missile threats in the hands of rogue nations.

Senator WARNER. Now, this phrase that within months we will—whatever you want to use—bump up or challenge the ABM Treaty—all during that period, our President will be conducting consultations and negotiations, will he not, Secretary Wolfowitz?

Secretary WOLFOWITZ. We expect those negotiations and discussions to be intensifying significantly in the coming months.

Senator WARNER. Correct. In good faith, he is manifesting not only to our country but to the world that he is trying to work within the treaty framework to seek a resolution of the differences.

Secretary WOLFOWITZ. That is absolutely right. We are also demonstrating in a number of ways, including most importantly with the way we are bringing down our offensive forces, that we are no longer enemies with Russia and that we need to move beyond the old thinking that put the focus on being able to annihilate one another within 30 minutes of warning. That is old. I understand we lived with that kind of thinking for so long. There are vestiges of it certainly even in this country. It is rife in Russia, but I think we can move beyond it.

Senator WARNER. I think that case is made very clearly.

Another observation in my judgment, and I say this with great deference to this institution which I have been privileged to serve these almost 23 years. I really believe Congress will reach down into its own wisdom and find a common basis to support our President. But should somehow we fail to do so or should we turn up the rhetoric and heat it up, does that not hinder our President in those negotiations?

Secretary WOLFOWITZ. I think, Senator, you are absolutely right. The entire record of negotiating with almost every country and certainly with Russians and the former Soviet Union suggests that the most effective way to reach agreement is to demonstrate some determination to move forward on our own.

Senator WARNER. If we can move as partners, it is more likely that he will succeed.

Secretary WOLFOWITZ. Absolutely. I think partnership and solidarity between the executive and legislative branches on this issue is crucial.

Senator WARNER. Now, the law of the land was stated by Congress in the Cochran legislation. There were 97 yeas and 3 negative votes on that piece of legislation. It is very clear that it gives the President, this President—it was enacted and signed by the previous President—the clear authority to move within the technological framework of milestones. In any way can anyone point to where the President has breached that law?

Secretary WOLFOWITZ. I believe he is in full compliance with both the letter and the spirit of it.

Senator WARNER. I agree with that.

Now, General Kadish, let us assume for the moment that we are able to work through a satisfactory revision of the framework of the ABM Treaty. Your program under 2002 is consistent with the Cochran bill, namely that we will pace ourselves in accordance with technology?

General KADISH. That is correct, Senator.

Senator WARNER. I think it is important, General Kadish, that we also address the question of the limited defense which we use in terms of the intercontinental ballistic missiles. That is what we are endeavoring to do to defend ourselves against the hopefully less than a dozen that attack us. Assuming this system becomes effective, I do not see how it poses a threat to Russia. Their arsenal could crush that system like an ant. Am I not correct?

General KADISH. The system certainly would have inherent limitations against long-range missiles.

Senator WARNER. The question simply is this. If we are able to bring into being technologically this limited defense, the Russian inventory today could overwhelm it in a matter of hours. Am I not correct?

General KADISH. That is correct.

Senator WARNER. It does not pose a threat. Do you see that it poses any threat to Russia to induce them to go into an arms race again?

General KADISH. It is not designed against thousands of nuclear warheads.

Senator WARNER. It would be overwhelmed.

General KADISH. So, it would be overwhelmed, as could any defenses in the history of mankind could eventually be overwhelmed.

Senator WARNER. Now, again, the word "limit" is applied to the intercontinental system, but when we get down to the smaller systems, particularly those systems we hope to have in the architecture to defend our forward deployed troops, those systems could interdict more than the few missiles. Am I not correct?

General KADISH. That is correct. Our intention would be to have enough inventory to have a robust protection of our deployed forces.

Senator WARNER. I think some clarity has to be made as we move along because the fundamental concept is limited and that is the main target that we are dealing with under the ABM Treaty. But there will be more missiles involved in that system.

My time is up.

Chairman LEVIN. Thank you, Senator Warner.

Senator Lieberman.

Senator LIEBERMAN. Thank you, Mr. Chairman.

Secretary Wolfowitz and General Kadish, I thank you for your testimony today. I think this is a very important day and discussion on a most significant and difficult issue. I do think that you have moved us forward today by speaking directly about this new approach to a ballistic missile defense. I for one find it helpful.

I hope that the aim that you described, Secretary Wolfowitz, of ultimately having bipartisan support here in Congress is realized because this is a very important question of national security we are discussing. Traditionally we have found ways not to divide on

partisan lines on exactly this kind of question. That goal will be greatly assisted if the administration speaks with more clarity and consistency on this question than it has up until this time. I would like to feel that the statements that you have made today, which I have found at least personally to be helpful and clear, whether one agrees with them or disagrees with them, whether one is reassured by them or alarmed by them, will set a standard for what will follow.

Words are very important here, as Senator Levin's questions illuminated. I think it is very important that everyone in the administration use the same language, be on the same program, and that will help us to find the common ground that we ought to be able to find on this critical issue.

I implore you to spend as much time as necessary in speaking directly to the members of this committee in closed and open session, and to members of the relevant House committees so we can find that common ground that is ultimately going to be in the interest of our country.

The prevailing law here—and we are, after all, a Nation of laws—is the National Missile Defense Act of 1999. I was an original cosponsor of this proposal with Senator Cochran and others. I think it is important for us to go back to it because it is important for our allies and others around the world to understand this, that in this law, the United States committed to deploy as soon as is technologically possible an effective National Missile Defense system capable of defending the territory of the United States against limited—limited—ballistic missile attack.

So the question then, according to this law, is not whether we will build a ballistic missile defense, but how and when we will do it.

These are serious questions that involve matters of international treaty and international security. I think you have spoken directly to this today, and I appreciate it. I for one will not shy away from supporting authorization and appropriation that might necessitate a withdrawal from the ABM Treaty if I am convinced that it is necessary to do so for the protection of our national security and that the administration has made every possible effort to negotiate the appropriate modifications of the ABM Treaty with the Russians and that effort has failed.

I think your directness has helped us to move forward here into difficult territory, but it is important territory. I urge you to hold the line on the position you have taken as we begin to negotiate and discuss more specifically how we can achieve a bipartisan agreement on this critical question.

The National Missile Defense Act of 1999 had in it what I would consider to be two qualifications or conditions. The first is that the deployment of the National Missile Defense would be subject to the annual authorization of appropriations and the annual appropriation of funds for National Missile Defense.

I have taken that to mean that we in Congress and members of whatever administration was in office at the time would have to make a judgment about priorities. How much are we prepared to invest in NMD or BMD now as compared to other national security needs?

I want to ask you to go into a little more detail in answering a question that you touched on in your opening statement. The Bush administration's proposed defense budget for fiscal year 2002 goes up overall 7 percent after inflation. The budget proposal for the Ballistic Missile Defense Office goes up 57 percent after inflation. We have seen in hearings that this committee has held that, notwithstanding the 7 percent overall increase, there are serious cuts in weapons procurement. Procurement for the Navy, for instance, is down as we rapidly head toward less than a 300-ship Navy. Basic research and development for the Air Force, for instance, is down, and certain elements of readiness and training are less than they have been in the past.

So, my question is, can you respond to that qualifier or condition in the National Missile Defense Act of 1999 that the administration has its priorities right here and that the reductions in funding that are part of the overall budget, as compared to the dramatic increase in the National Missile Defense budget, are justified?

Secretary WOLFOWITZ. A couple of points, if I might. First, on your original comment, if there has been any lack of clarity in what people say—and I also address this to the chairman—it is not because of a lack of desire to achieve clarity. It is because these issues are murky. As I said, there are technological uncertainties and there are legal uncertainties. We are trying—and my statement represents another part of that effort—to be as clear and direct as we possibly can.

We have never for a minute hidden the fact that we have directed General Kadish to develop a program that is not in any way constrained by the treaty, not to go out of his way to look for opportunities to violate the treaty at its earliest possible time, but also not to forswear something that makes developmental or deployment sense because it would conflict with the treaty. That has been a whole new revision in the way BMDO has done its work. It has flushed new ideas and new issues on the table, and we are trying to be as clear as we possibly can with Congress.

I agree these are important issues and we will continue to do that. I appreciate the effort of bipartisanship, but we have never made a secret of the fact that the President fully intends to deploy a defense of the United States. Of course, that is what the National Missile Defense Act calls for as well. It should be no secret to anyone that article I of the treaty explicitly prohibits such defense of American territory.

So, we are on a collision course, and trying to determine the exact point of collision or the closest point of approach. But no one is pretending that what we are doing is consistent with that treaty. We have to either withdraw from it or replace it.

The question about priorities is a crucial one, we have been wrestling hard with it. I would challenge the notion that we have increased missile defense at the expense of everything else. I am sorry the numbers are not as fresh in my mind as I would like, but we have I think approximately a \$22 or \$23 billion real increase in defense spending this year over the 2001 budget, and I believe of that, roughly 10 percent of that increase is in missile defense. We have weighed that against many other priorities. We have invested even more heavily in improved flying hours, improved base

maintenance, not to mention increased health care costs, in which there is a \$5 billion real increase. The largest single portion of that \$23 billion increase is essentially going to welfare and training of our troops which is the first priority. There is a \$7 billion increase in research and development over and beyond the \$2.4 billion that we are adding to missile defense.

Yes, Senator, I really do believe that is an appropriate allocation. As I said in my opening statement, our current schedule for deploying PAC-3 is woefully inadequate. It has to be accelerated. On the current schedule, it will not be until the year 2007 that we complete the planned deployment, and that is not nearly as thick as it ought to be in places like Korea. So, we are accelerating theater missile defense, as well as longer-range missile defense, and we will continue to weigh those priorities very carefully as we look in the 2003 budget where we really have to address the fundamental issues of force structure—how large the Navy should be, for example—as you mentioned in your comments just now. What Secretary Rumsfeld is trying mightily to do with a very intensive approach to the quadrennial defense review is to flush up as much as possible the tradeoffs so that he, the President, and ultimately Congress can make sensible decisions about what we are funding and what we are not funding and where those tradeoffs lie. But I really do believe this is a very important priority for our country.

Senator LIEBERMAN. Thank you, Mr. Secretary. My time is up.

I would just say finally that it seems to me that you and General Kadish have laid out the administration's plans regarding missile defense with clarity and directness today. That is an important step in this very significant debate. I just urge you again to not only work as hard as you can with the Russians to see whether we can achieve a modification in the treaty to allow the testing program that the administration wants to carry out or something like it, but that you work as hard as you possibly can with members of both parties in Congress to see if we can find a way to go forward on this critical national security matter without having party identification divide us. I think that weakens the overall effort and it is worth really reaching as far as possible to avoid that result. Thank you.

Chairman LEVIN. Thank you, Senator Lieberman.

Senator Lieberman has made reference to the National Missile Defense Act, and we will make part of the record at this point the entire act, including section 3, which was not referred to, which is the policy of the United States to seek continued negotiated reductions in nuclear forces of Russia.

The statement by President Clinton when he signed that Missile Defense Act on July 23, 1999, will also be made part of the record, including his words that our missile defense policy must take into account our arms control and nuclear nonproliferation objectives.

I do not know if that was the second condition that Senator Lieberman was going to refer to, but his time ran out. We will make both of those documents part of the record.

[The information referred to follows:]

Public Law 106-38
106th Congress

An Act

To declare it to be the policy of the United States to deploy a national missile defense.

July 22, 1999
[H.R. 4]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Missile Defense Act of 1999".

National Missile
Defense Act of
1999.
10 USC 101 note.

SEC. 2. NATIONAL MISSILE DEFENSE POLICY.

It is the policy of the United States to deploy as soon as is technologically possible an effective National Missile Defense system capable of defending the territory of the United States against limited ballistic missile attack (whether accidental, unauthorized, or deliberate) with funding subject to the annual authorization of appropriations and the annual appropriation of funds for National Missile Defense.

10 USC 2431
note.

SEC. 3. POLICY ON REDUCTION OF RUSSIAN NUCLEAR FORCES.

It is the policy of the United States to seek continued negotiated reductions in Russian nuclear forces.

22 USC 5901
note.

Approved July 22, 1999.

LEGISLATIVE HISTORY—H.R. 4 (S.257) (S. 269):

HOUSE REPORTS: No. 106-39, Pt. 1 (Comm. on Armed Services).

SENATE REPORTS: No. 106-4 accompanying S. 257 (Comm. on Armed Services).

CONGRESSIONAL RECORD, Vol. 145 (1999):

Mar. 18, considered and passed House.

May 18, considered and passed Senate, amended, in lieu of S. 257

May 20, House concurred in Senate amendment.

WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 35 (1999):

July 23, Presidential statement.



July 23, 1999

STATEMENT BY THE PRESIDENT

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

July 23, 1999

STATEMENT BY THE PRESIDENT

I have signed into law H.R. 4, the "National Missile Defense Act of 1999." My Administration is committed to addressing the growing danger that rogue nations may develop and field long-range missiles capable of delivering weapons of mass destruction against the United States and our allies.

Section 2 of this Act states that it is the policy of the United States to deploy as soon as technologically possible an effective National Missile Defense (NMD) system with funding subject to the annual authorization of appropriations and the annual appropriation of funds for NMD. By specifying that any NMD deployment must be subject to the authorization and appropriations process, the legislation makes clear that no decision on deployment has been made. This interpretation, which is confirmed by the legislative record taken as a whole, is also required to avoid any possible impairment of my constitutional authorities.

Section 3 of the Act states that it is the policy of the United States to seek continued negotiated reductions in Russian nuclear forces. Thus, section 3 puts the Congress on record as continuing to support negotiated reductions in strategic nuclear arms, reaffirming my Administration's position that our missile defense policy must take into account our arms control and nuclear nonproliferation objectives.

Next year, we will, for the first time, determine whether to deploy a limited National Missile Defense, when we review the results of flight tests and other developmental efforts, consider cost estimates, and evaluate the threat. Any NMD system we deploy must be operationally effective, cost-effective, and enhance our security. In making our determination, we will also review progress in achieving our arms control objectives, including negotiating any amendments to the ABM Treaty that may be required to accommodate a possible NMD deployment.

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Chairman LEVIN. Senator Inhofe.

Senator INHOFE. Thank you, Mr. Chairman.

First of all, General Kadish, I appreciate the visual that you brought with you today and the way you explained it. I wish all of the American people could be here watching this.

I said to Senator Smith, because he was a little late in getting here, Secretary Wolfowitz, that your opening statement I believe was the most passionate, accurate, and superb opening statement I have heard in the 15 years that I have served in the House and the Senate. I thank you very much for that.

Secretary WOLFOWITZ. Thank you, Senator.

Senator INHOFE. I know it came from your heart.

I want to ask four quick questions that should just take a minute to answer. The reason I want to ask these questions is we sit around the table here and we are with Senators and we are with top military leaders and with negotiators and experts. But there are a lot of people who are not here today, and those are the people, a lot of whom are in Oklahoma. There are some basic questions that I think need to be brought to their attention, questions we know the answer to but they do not. But they are performing one important thing, and that is they are paying for all this fun that we are having. So, I would like just to pose four quick questions and then I want to get into something here.

The first is, does the United States currently have the ability to defend the 50 States against an incoming missile? Very simply asked.

Secretary WOLFOWITZ. None at all, Senator.

Senator INHOFE. Does article I of the ABM Treaty not explicitly prohibit the United States from defending our territory, the 50 States, against missile attack?

Secretary WOLFOWITZ. Yes, it does.

Senator INHOFE. Does article V not prohibit the development, testing, and deployment of sea-based, air-based, space-based, or mobile land-based missiles?

Secretary WOLFOWITZ. Yes, it does, Senator.

Senator INHOFE. Now the other question. The three of us have something in common. We are not attorneys. So, let me ask you the question that is asked of me quite often because I have not heard a good answer yet. Why is it we are sitting around spending so much time talking about the violation or the amending of a treaty that was between two countries, one of which no longer exists today?

Secretary WOLFOWITZ. I am not a lawyer, so I will not get into legal issues. I know the President has made a judgment that rather than to get into those legal issues—and I know there are lawyers who would argue that the treaty lapsed with the demise of the Soviet Union—that it is a very important fact in the relationship between the United States and Russia. In fact—I will try to keep this answer short, but my impression from discussions that I had in May in Moscow, when the President sent Steve Hadley and I there and from the discussions that Secretary Rumsfeld has had with his Russian counterpart, is that the ABM Treaty is important more because it is a tie to the United States that they badly want to preserve, rather than because of its exact content. I think that is the spirit in which we are trying to replace it.

Senator INHOFE. Thank you very much.

Let me just share with you—there are two areas of this whole debate that I have found most offensive. One is the argument about the suitcase and the terrorist threat. It is a very real threat. It is there. There is no one in this hall today who is more sensitive to that than I am being from Oklahoma, being from an area where I was moments after the largest domestic terrorist attack in the history of this country, and seeing what happened to the Murrah Federal Office Building and seeing the parts of bodies stuck to the walls and people I knew intimately with loved ones that were never found.

To think that the explosive power of that was about 1 ton of TNT, and yet those nuclear warheads that we talk about, in most cases the smallest ones are about a kiloton, 1,000 times the explosive power that devastated the Murrah Federal Office Building and killed 168 Oklahomans. When you put that in perspective, it changes the whole thought I think around this subject in terms of defending ourselves.

The other thing that I have found offensive is this discussion today of the treaty. It is a treaty that could be argued is not there, but let us assume that that treaty is in some degree of effect. It was put together at a time in our history that we three are all old enough to remember even though I did not agree with it at the time, but there was a pretty smart guy named Henry Kissinger who did. He felt that we did have two super powers and that perhaps this mutual assured destruction made some sense at that time.

But Henry Kissinger himself has said—and I have used his words on the floor of the Senate many times—this is not 1972. There are not two superpowers. In fact, the threat that is facing America today because of its proliferation and its lack of identity is greater in my opinion than it was at that time. He said, “It is nuts to make a virtue out of our vulnerability.” Here is the guy who was the architect of the ABM Treaty of 1972. As you have both so accurately pointed out, along with some others, that is not true today.

So, with that treaty as a major discussion, in the last few seconds here I want to just throw out a few things to at least get into this meeting the real sense of threat that faces this country. I agree with George Tenet, Director of Central Intelligence, who before this committee said that we are very likely in the most threatened position today that we have been in the history of our Nation.

Remember the movie that we saw recently that is out right now, “Thirteen Days,” talking about the Cuban missile crisis of the 1960s. We have the same defenses today that we had back then. People really are not aware of this.

We had something happen in 1996 in the straits off of Taiwan. Trying to intimidate their elections, the Chinese were firing missiles. Their second highest military authority said that we are not concerned about America getting involved because they would rather defend Los Angeles than Taipei.

We recall that just 2 years after that, the Minister of Defense of China, Chi Hou Tun, said war with America is inevitable.

You look at all of these and as you pointed out in your opening statement, Secretary Wolfowitz, the three-stage rocket—that was August 31, 1998—was a rocket from North Korea that has the capability of hitting the United States of America. Only 7 days before that, we had a letter, dated August 24, 1998, that said that it would be 5 to 10 years before that threat would be there.

We know that when they talked, during the last administration, about how far out this threat was, later on they said, well, that is an indigenous developed missile. We are not talking about that anymore. We are talking about countries that we know have the ability to fire a rocket to hit us and we have no defense for that. We know that they are trading technology and assistance with

countries like Iraq, Iran, Syria, Libya, Pakistan. We know specifically that Iraq is trading technology and systems with North Korea. We know that Saddam Hussein said at the end of the war, if we had waited 10 years to go into Kuwait, we would not have had to worry about America because we would have had a missile that could have reached them. Here it is now 10 years later.

So, my question is, what is your current comfort level?

Secretary WOLFOWITZ. My comfort level is very low, or my discomfort level is very high. I should have said that in partial answer to Senator Lieberman's previous question on the relative priorities: if you go back to the Gulf War, we over-estimated virtually every Iraqi capability except this one. Ballistic missiles were the only area in which Saddam Hussein was much more capable than we thought he would be.

We know if there were a war in Korea this year that the ballistic missile threat from North Korea would be one of the most serious threats we would face. One of the decisions Secretary Rumsfeld made was to stop talking about this difference between national and theater because many of these capabilities apply across the board. Just as North Korea is seeking to extend the range, it is also true that our ability to defend across the board in a Korean conflict would be crucial.

The airborne laser, for example, which would be a clear violation of the ABM Treaty, if it is successful, can shoot down short-range missiles as well as long-range missiles in boost phase. When you do an analysis of what would make the greatest difference for a theater missile defense on the Korean peninsula, I believe the analyses conclude the most important effective advance would be airborne lasers.

So, I think we are sitting here already very vulnerable to short-range missiles, increasingly vulnerable to intermediate-range missiles, and as you said, Senator, it is only a matter of time and not 15 years but 5 or less before those countries acquire the capability to reach the United States, and not just a limited piece of the United States.

Senator INHOFE. Thank you.

Secretary WOLFOWITZ. Thank you.

Chairman LEVIN. Thank you, Senator Inhofe.

Senator Cleland.

Senator CLELAND. Thank you very much. Thank you all for appearing today.

General Kadish, you mentioned an interesting point that in the history of warfare, there has been no defense system that was 100 percent perfect. Is it your opinion that this National Missile Defense system that is seeking to be deployed will not be 100 percent perfect in defense?

General KADISH. We will make it as good as we can make it, Senator.

Senator CLELAND. No, no. The question is, is it not true that this system that we are going to spend billions on to perfect and test will not be 100 percent effective?

General KADISH. I do not think I could answer that question the way it is stated because 100 percent against what amount of

threat? Although you could be overwhelmed at some point, these systems can be very effective against a certain number of threats.

Senator CLELAND. All it takes is one nuclear warhead to ruin our day.

Now, is it not true? You just said it yourself. In the history of warfare, there was no defense system that could not be overwhelmed. So, is it not true the deployment of this National Missile Defense system will not be 100 percent effective? There is no such thing out there as 100 percent security that we are going to get from that in terms of incoming missiles? Is that not true?

General KADISH. That is true, but it is true for all the weapons systems we have in all our services.

Senator CLELAND. Now, is it not also true that over the last 29 years since 1972, the inauguration of the ABM Treaty, that the combination of our deterrence and our treaty obligations, particularly in terms of the ABM Treaty, has been 100 percent effective? We have not had an incoming missile in terms of the United States territory. Is that not true?

General KADISH. That is true.

Senator CLELAND. It does seem to me that this is part of the crux of this argument here. Are we going to shift from a system that has been reliable for 30 years, a combination of deterrence and treaty obligations, particularly with Russia, to something here that actually is not going to be 100 percent effective and may, indeed, destabilize, as the chairman has indicated, our relationships not only with Russia, but with China and cause the Russians to MIRV their warheads, cause the Chinese to build more missiles and actually destabilize our relationship with our allies?

Secretary Wolfowitz, in all honesty, your comment about bumping up against the ABM Treaty but not inhaling—[Laughter.]

That is strange credibility.

So, that is where I get off the boat. I happen to be a big supporter of theater missile defense. There is a distinction between theater missile defense and a National Missile Defense system. Theater missile defense is allowed under the law. All this testing we saw, General Kadish, that you pointed out, was that not allowable under the ABM Treaty?

General KADISH. Yes, it was.

Senator CLELAND. Well, we could continue to test and do those kind of things that we need to do. As a matter of fact, I am a strong supporter of the Arrow missile defense program with the Israelis, the THAAD missile high altitude intercept, the Patriot-3. Those are theater missile defense programs that can protect our troops and can be moved from time to time against whatever rogue nation we choose to target it against.

This deployment of a National Missile Defense system is actually illegal under the ABM Treaty, and I think if we throw out the ABM Treaty here, we are throwing out the baby with the bath water. That is where I get off the boat.

Let me just say I also think that it compromises other aspects of our defense. I just finished reading "Waging Modern War." It is a book about the whole Balkan war. We used precision weapons to a degree unheard of in modern warfare, and yet the Chief of Staff of the Air Force sat right at that table 2 days ago, and when I

asked him if we had replenished our stockpile of precision munitions, he said no. Yet, we are going to spend \$2.2 billion extra here on some National Missile Defense system in an effort to deploy it when it is not quite ready for prime time and we cannot even replenish the stockpile of precision munitions that do work. I am greatly concerned that we are putting the cart before the horse here.

I will say that the chief sat here and talked about \$30 billion in unfunded requirements that are not being met. I would say to you that increasing National Missile Defense funding by some 57 percent more than last year is a little bit out of line with what we are trying to do in other aspects of our military.

I think, quite frankly, the real threat, as the chairman has indicated and as others have indicated and intelligence analysts have indicated, is not so much from a missile with a return address, but from a terrorist attack somewhere. Look at the most recent attack. It was on the U.S.S. *Cole*, sitting dead in the water and vulnerable to a terrorist attack.

So, I think we have to rethink our priorities here. The Defense Department's own reports call the deployment of this National Missile Defense program into great question.

Mr. Chairman, I have a copy of the report. It took 8 months to get this out of the Pentagon. I would like to have it entered into the record, along with an article, "Pentagon Report Reveals Flaws in Missile Defense." I ask that this report be included in the record.

Chairman LEVIN. Both will be made part of the record.

[The information referred to follows:]

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DIRECTOR
OPERATIONAL TEST AND EVALUATION
REPORT IN SUPPORT OF

NATIONAL MISSILE DEFENSE
DEPLOYMENT READINESS REVIEW

10 August 2000

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I. INTRODUCTION

The Department of Defense Deployment Readiness Review (DRR) for National Missile Defense (NMD) will recommend to the President whether to begin the process of deploying an initial capability to defend all fifty of the United States against limited attacks from "states of concern"¹ or from accidental or unauthorized launches.² A decision to move toward deployment will permit site preparation for an X-band radar in Shemya, Alaska; construction schedules call for this decision by November 2000 if an operational capability is to be ready by 2005.³

This report provides an independent assessment of the NMD system's potential operational effectiveness and suitability at this time. Since NMD is still early in its development process, the data available for this assessment is limited, particularly at the system level. There also have been development delays, planned simulations were not available, and several important test events have slipped beyond the DRR. Also, it is unusual for a major defense acquisition program to be placing emphasis on a deployment decision based on limited data four or more years before the scheduled *start* of Initial Operational Test and Evaluation (IOT&E). We recognize that we are making our assessment of operational effectiveness before the system has completed development, and we expect our assessment will change as the system evolves.

The Ballistic Missile Defense Organization (BMDO) has defined – and OSD has approved⁴ – seven Deployment Readiness Criteria for this DRR. These criteria address the potential of the NMD design and technology to meet the User's operational requirements, the ability to manufacture, field and sustain the initial system and, lastly, its affordability. This report focuses on the three criteria related to operational effectiveness

¹ Formerly referred to as rogue states.

² NMD ORD Revision (Approved 27 June 2000).

³ A DAB is planned for FY 2001 to authorize upgrades to Early Warning Radars and to build the XBR. A DAB in FY 2003 will authorize procurement and deployment of the interceptors.

⁴ The NMD deployment readiness criteria were approved by the Under Secretary of Defense (Acquisition & Technology) in June 1999.

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and suitability,⁵ and our assessment is made relative to the threshold ORD requirements for the initial increment of the NMD system called Capability 1 or C1. In addition to assessing how well the criteria have been demonstrated from a technical standpoint, this report also addresses the impact of test limitations and NMD Program evolution on the operational utility of a system to be deployed by 2005. We make only minimal comment on the criteria addressing manufacturing, contractual readiness, and affordability.

This report draws on data from the Integrated Flight Tests, Integrated Ground Tests, and exercises at the Joint National Test Facility (JNTF). We also draw on developmental test data at the element level, such as radar data gathered in Risk Reduction Flights, to the very limited extent that it is available. We have reviewed products from both the Lead System Integrator (LSI) and the joint Operational Test Agency (OTA) team, have monitored tests and exercises, and have attended design review and test analysis meetings. A complete listing of data products used is given in Appendix B.

⁵ Traditionally, operational assessments address the Critical Operational Issues (COIs) listed in the Test and Evaluation Master Plan (TEMP). A crosswalk (see Appendix A) between the OSD approved Deployment Readiness Criteria and the COIs defined in Part IV of the TEMP indicates that the criteria pertaining to operational effectiveness and suitability generally span the space defined by the COIs, with one major exception. The Deployment Readiness Criteria do not explicitly address system survivability and security (COI-5); Criterion 6 (Capability to Sustain the System) could be broadly interpreted to cover this area.

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II. SUMMARY

The NMD system has partially fulfilled the three Deployment Readiness Criteria relating to operational performance, a finding based on the results from ground and integrated flight testing conducted to date. The NMD program has experienced significant delays in development and testing. Unless the program is restructured, the proposed deployment schedule is not likely to be realized. Also, the operational role of the limited system that might be initially deployed is still evolving. Lastly, the NMD Program has not yet developed a plan for growing the initial C1 capability to the full objective system.

A. DEMONSTRATION OF DEPLOYMENT READINESS CRITERIA

Criterion #1: "Demonstration of integrated system/element level functions through integrated ground and flight test, including two intercepts...of which one must be an integrated system test. To protect the FY05 IOC, a single intercept allows award of construction contracts (but not the start of construction), long haul communications, and approval of necessary long lead hardware."⁶

This criterion has not been fully met since the NMD system has not achieved two intercepts nor demonstrated integrated system performance with a successful intercept. It did achieve an intercept in IFT-3, which permits the award of construction contracts and acquisition of long lead hardware to protect the FY05 IOC. Furthermore, a significant, but not complete, degree of system functionality has been demonstrated with prototypes and surrogates. In each test, new functionality has been demonstrated in one element or another, and the program intends to integrate new performance features as it moves forward. The successful intercept was achieved in a test focused on demonstrating hit-to-kill and was not in an integrated system test with all the system elements represented.

⁶ Briefing by BG Willie Nance, *NMD Decision Criteria*, 11 June 1999. Criteria approved by USD(A&T), 23 June 1999.

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The demonstrations of system functionality have significant caveats associated with them, including reliance on surrogate elements and range assets, e.g., GPS and/or the FPQ-14 range radar for engagement planning including Weapon Task Plan generation. Also, the scope of the threat presented in the flight tests was limited. Chapter V discusses this area in more detail.

Criterion #2: "An assessment of the ability of NMD system design to meet system performance requirements as specified in the NMD ORD." The assessment addresses four Key Performance Parameters (KPPs):

1. Defense of the United States (at ORD specified levels)
2. Human-in-Control
3. Automated BMC3
4. Interoperability

The NMD system's ability to defend all fifty states from attacks at ORD-specified levels (KPP #1) can not be satisfactorily assessed, primarily because the simulations that were to demonstrate this with confidence and high fidelity have not developed as planned.

Integrated Ground Tests (IGTs), using the computer processor-in-the-loop Integrated System Test Capability (ISTC) simulation, were to provide operationally realistic data on 13 "design-to" scenarios. A high fidelity digital simulation, the LSI Integration Distributed Simulation (LIDS), was to have been used by the contractor and OTA team to perform analysis of an even broader set of scenarios to demonstrate that the entire United States would be adequately defended. The ISTC proved to be too immature to provide reliable estimates of performance, and the development of the digital simulation, LIDS, is behind schedule and was not available to support analyses of overall system performance as originally intended.

Battle Planning Exercises and C2Sims show that the system has demonstrated satisfactory progress in meeting two of the four required KPPs, namely, Human-in-Control and automated BMC3. Demonstration of the interoperability KPP has not yet begun.⁷ Refer to Chapter V for more details.

⁷ The approved ORD of January 1997 had only KPPs 1 - 3. The addition of the interoperability KPP was raised in 1999 but was not formally added until the new June 2000 ORD was approved. Assessing interoperability was not part of the LSI evaluation plan for the DRR.

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Criterion #3: Maturity of the deployable system design, including the potential to evolve to counter more sophisticated threats.

Design reviews have not identified any significant issues pertaining to the maturity of the design of the NMD system or elements. However, the ability to perform a credible assessment of NMD design maturity is confounded by the current immature state of ground test facilities and models and simulations. Furthermore, the JPO has not yet developed a formal, credible plan for evolving the design from C1 to C2/C3. In particular, the ability to discriminate more sophisticated countermeasures needs special consideration.

Discrimination is a technical challenge for the hit-to-kill NMD system and a cause of concern regarding the potential of the C1 system to evolve to an effective C2 and C3 capability. The program has presented analysis and simulation results that indicate that techniques to discriminate unsophisticated countermeasures are in hand. However, the target suites flown in the three intercept tests to date included only two objects – an RV and a large balloon – and the EKV was required to discriminate the RV from only the large balloon and deployment bus, objects with signatures very dissimilar to the RV.⁸ The EKV did successfully discriminate in IFT-3, but this demonstration is modest relative to the C1 threat space of unsophisticated countermeasures. Tests using balloons that match elements of the RV's signature begin with IFT- 9, scheduled for late FY 2002. The present lack of a high fidelity hardware-in-the-loop facility precludes convincing demonstrations of discrimination against the broader set of unsophisticated countermeasures, except in flight test.

Evolution of the C1 system to counter more sophisticated countermeasures has not been described by the NMD program in detail. We are unaware of any significant simulation efforts that address the issue of meeting C2 performance levels using either the EKV alone or with the discrimination capability of the radar. In addition, the current C1 test program does not consider other simple unsophisticated countermeasures – those falling outside the strict definition of “unsophisticated” yet seemingly simple to implement, e.g., tumbling RVs and non-spherical balloons.

⁸ The deployment process can create incidental debris in addition to the objects intentionally deployed. On IFT-5, the large balloon was carried but apparently did not deploy.

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B. OPERATIONAL SCOPE

Over the recent course of the development program, the intended operational role of an NMD system has been defined in different ways. These differences are reflected in inconsistencies in requirements documentation and, thus, there is some ambiguity as to what is really desired.

The NMD Program transitioned from a technology readiness program to a Major Defense Acquisition Program in 1996. The 1997 BMDO Report to Congress (RTC) stated the objective of the system "to defend the United States from an emerging Rest-of-World (ROW) rogue state ballistic missile threat or against a limited or unauthorized missile launch."⁹ That Report also stated that:

The intelligence community has concluded that no country, *other than the major declared nuclear powers*, will develop or otherwise acquire a ballistic missile in the next 15 years that could threaten the contiguous 48 states; only a North Korean missile in development, the Taepo Dong 2, could conceivably have sufficient range to strike portions of Alaska or the far-western Hawaiian Islands, but the likelihood of it being operational within five years is very low. [italics added]

– 1997 BMDO Report to Congress, Page 3-3

Consistent with this threat estimate, thirteen "design-to" scenarios were developed that included both ROW threats and accidental or unauthorized launches by established nuclear powers. Only four of the thirteen scenarios posited launches by ROW or rogue states; the rest postulated accidental or unauthorized launches by the major declared nuclear powers, including launches at targets on the East Coast. The thirteen design-to scenarios assumed unsophisticated countermeasures only.

The NMD Program's focus appears to have shifted to the threat posed by North Korea with the accidental/unauthorized threat becoming a secondary consideration. The recently issued Defense Planning Guidance Update FY 2002-2007 goes further, defining the purpose of NMD in terms of only rogue nations. The recently revised NMD ORD continues to mention accidental and unauthorized launches prominently. DoD and BMDO leadership have identified a limited missile attack from states of concern as a primary threat while continuing to mention some "residual" capability to defend against

⁹ RTC, page 3-1

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the possibility of an unauthorized or accidental launch of more sophisticated threats.¹⁰ Thus, there is some ambiguity in the operational requirements, particularly in defining the nature of the residual capability expected from NMD.

Contractually, the LSI contractor is required to deliver a C1 Capability that is effective against threats that deploy only "unsophisticated" countermeasures; this has not changed since the contract's inception. It is now recognized that accidental or unauthorized launches could employ countermeasures that would be considered sophisticated according to the definition in the LSI contract. A more aggressive program to complete the evaluation of C1 performance against unsophisticated countermeasures and to explore the technology to address more sophisticated countermeasures would better define the residual capability and move development toward realizing a C2 capability.

C. SCHEDULE ISSUES

Since the program was restructured in January 1999, the NMD program has experienced numerous program development delays, while the construction and production schedules have not slipped. To the program's credit, the flight test program has been event driven, with tests conducted only when the Program Office felt ready. As a result, IFT-3 was conducted 18 months behind the original 1996 schedule and four months behind the 1999 schedule. More recently, as illustrated in Figure II-1, additional significant test slips have occurred since the January 1999 program restructure. In particular, IFT-5 was to be conducted about six months before a June 2000 DRR but was actually executed on 8 July. This forced the DRR to be moved to August 2000. IFT-6, which had also been planned to precede the DRR, is expected to occur in January or February 2001.

¹⁰ For example, on February 2, 1999, the Secretary of Defense stated: "The primary mission of the NMD system being developed is the defense of the U.S. - all 50 states - against a limited strategic ballistic missile attack such as could be posed by a rogue nation. Such a system also would provide some capability against a small accidental or unauthorized launch of strategic ballistic missiles from more nuclear-capable states."

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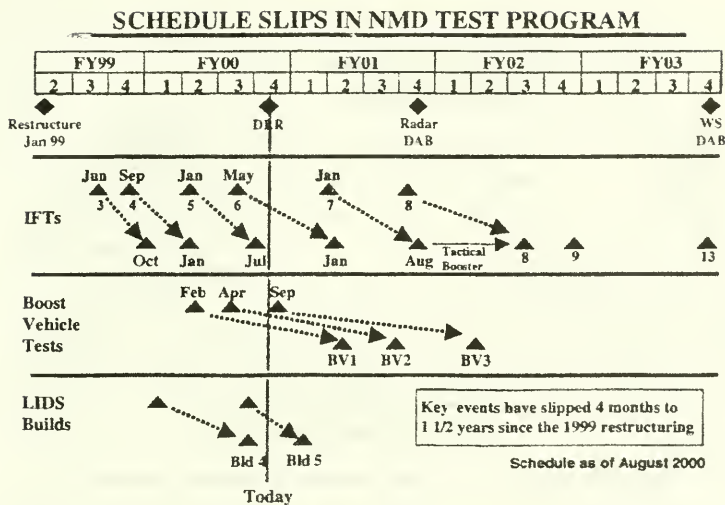


Figure II-1. Schedule Slips in the NMD Test Program

Development delays have already caused schedule slips of flight tests of the tactical booster to beyond the DRR. Boost Vehicle (BV) test #1 was originally scheduled for February 2000, then July 2000, and now second quarter of FY01. BV2 has slipped about a year. BV3, the first test to integrate the EKV with the booster, is behind about a year and a half. Additionally, the first use of the operational booster stack in an intercept test will now occur in IFT-8, vice IFT-7 as originally planned. As a result, the authorization of long lead acquisition for the Capability 1 (C1) interceptor system will have to be delayed commensurate with that testing.

Delays in the flight test program are the most visible, but developmental problems in simulation and ground test facilities may have an even greater impact. Since the flight test scenarios are severely constrained, ground testing and simulation are critical to evaluating system performance and the fulfillment of ORD requirements. The shortfalls in ISTC and delays in the LIDS delivery have already been mentioned.

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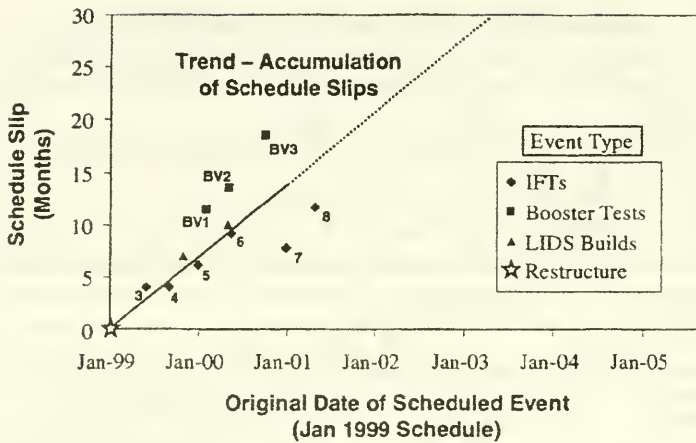


Figure II-2. Accumulation of Slips in Test and Development Schedule

Unless these trends are reversed, an IOC in FY05 appears unlikely. Figure II-2 illustrates the trend of development schedule slips and estimates schedules slipping at a rate of 20 months every three years. If these trends persist and efforts by the NMD Joint Program Office (JPO) to “buy back” schedule are unsuccessful, the first flight test with a production representative interceptor (IFT-13), scheduled for the first quarter of FY03, would slip about two years.

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III. PROGRAM OVERVIEW

A. SYSTEM DESCRIPTION

The National Missile Defense (NMD) system has the mission of defending the entire United States against strategic ballistic missile attacks. The initial deployment capability, C1, is intended to defend against deliberate attacks by adversaries from states of concern and, to a lesser extent, limited accidental or unauthorized launches from the established nuclear-capable states. The C1 system is designed to meet the User's *threshold* effectiveness requirements, in terms of attack size and sophistication of countermeasures, and is the architecture under review at the Deployment Readiness Review. Key NMD system design concepts include:

- The NMD system is sized for limited attacks.
- The NMD system employs the hit-to-kill intercept concept; i.e., the threat is destroyed by force of impact.
- The NMD C1 system design will be constrained to a single weapons site.
- The NMD C1 system design is a ground-based system. Space-based sensors provide warning and cueing only.

The NMD program is expected to evolve from C1 in two phases to meet the system's *objective* effectiveness requirements. This will be accomplished by enhancing sensors and weapons, adding a constellation of low-orbit satellites (SBIRS-low), and increasing the number of radars, interceptors, and interceptor fields. The objective NMD system is referred to as Capability 3.

The NMD system is an integrated collection of "elements" that perform surveillance, detection, tracking, discrimination, and battle management functions, including engagement planning, intercept, and kill assessment. As depicted in Figure III-1, the NMD C1 system consists of the following elements:

- Battle Management, Command, Control, and Communications (BMC3)
- Weapon system: Ground Based Interceptors (GBIs) and support subsystems

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- Space-based sensors: Defense Support Program (DSP) and high-orbit Space Based Infrared System (SBIRS-GEO/HEO) satellites
- Ground-based sensors: Five Upgraded Early Warning Radars (UEWRs) and one X-Band Radar (XBR)

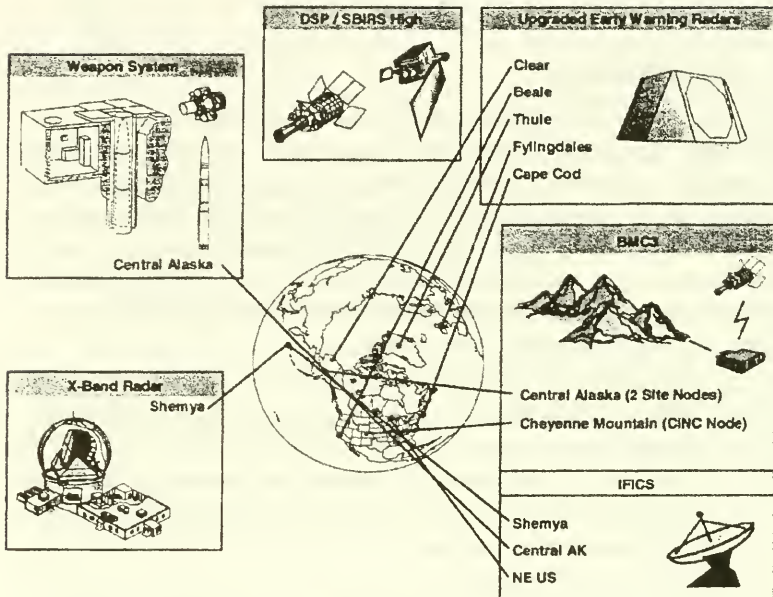


Figure III-1. NMD System C1 Architecture

1. Battle Management, Command, Control, and Communications

The BMC3 integrates and processes data from space-based and ground-based sensors to perform engagement planning, situation awareness, and decision support functions while maintaining a "human-in-control." It consists of the following principal subsystems:

- Battle Management, Command, and Control (BMC2) performs command and control, engagement planning, tasking, and situational awareness.
- NMD Communications Network provides the communication links between the individual NMD elements and external systems.

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- In Flight Interceptor Communications System (IFICS) enables the BMC3 to communicate with the interceptor while in flight. For example, target data are uplinked to the kill vehicle through the IFICS to reduce and correct errors in targeting estimates.

2. Weapon System

The Weapon System consists of Ground Based Interceptors and supporting subsystems. The interceptor is a silo-based, three-stage missile with a separating Exoatmospheric Kill Vehicle (EKV) that engages the threat above the atmosphere, well in excess of 100 kilometers. The kill vehicle employs visible and infrared sensors to acquire and track the target, performs onboard discrimination to select the reentry vehicle (RV) from associated objects, and fires divert thrusters to steer the vehicle to achieve a direct hit on the RV.

3. Space-Based Sensors

The NMD system relies on the constellation of early warning satellites to detect launches of enemy missiles and to track them during their boost phases. The NMD C1 space component will consist of a combination of existing DSP satellites as well as SBIRS High satellites yet to be deployed. The Mission Control Station is the ground component of the SBIRS system that consolidates satellite detection data, generates Quick Alert and Boost Phase Reports, and forwards them to the BMC3. From these reports, the BMC3 generates Sensor Task Plans that provide cues to the ground based radars for acquisition of the target complex. The SBIRS system is being developed as an Air Force program.

4. Ground-Based Sensors

The NMD C1 architecture includes six ground-based radars: five Upgraded Early Warning Radars and a single X-Band Radar that is currently under development.

The UEWRs are upgraded versions of the Air Force's existing UHF phased-array ITW/AA surveillance radars. They can operate autonomously or search for threat objects in response to cueing from the BMC3. The UEWRs are expected to track all threat objects and attempt to classify them as "threatening" or "non-threatening." Such information is provided to the BMC3 for supporting the generation of Weapon Task

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Plans¹¹ and In Flight Target Updates. If the intercept occurs within their coverage volume, the UEWs will collect intercept data to support a kill assessment made by the BMC3.

The X-band, phased-array radar based in Shemya, Alaska, provides radar coverage for a subset of threats aimed at Alaska, Hawaii, and the Western United States. In most cases, it cannot participate in engagements that threaten the Eastern Seaboard. Responding to cueing from the BMC3, it acquires threat objects, tracks them with great accuracy, and attempts to discriminate the RV from decoys and associated objects. Such information is provided to the BMC3 for supporting the engagement. The XBR will also collect kill assessment data, if the intercept occurs within its coverage volume.

B. NMD ACQUISITION STRATEGY – PHASED DEPLOYMENT

In April 1996, the DoD comprehensive review of its theater and national ballistic missile defense programs shifted NMD from a Technology Readiness Program (1993-1996) to a Major Defense Acquisition Program (Acquisition Category 1D), known as the NMD “3+3” Deployment Readiness Program. This program called for three years of intensive development work, followed by a deployment decision in FY00 that could result in an IOC three years later (FY03).

In January 1999, the Secretary of Defense redirected and modified the NMD program to implement a phased deployment approach, based upon technical progress, leading to an operational system as early as the end of FY05. The first decision point, the DRR, is to decide on the following issues: a recommendation to the Secretary of Defense whether to commit to deployment of the C1 system, selection of sites for all the elements, award of site-construction contracts, long haul communications, and approval of long lead radar hardware.

The January 1999 restructuring of the NMD program also added two other decision points (phased approach).

- An FY01 DAB will consider the building and/or upgrading of required ground-based radar systems – XBR and UEW – and the integration of command and control software into the Cheyenne Mountain Operations Center.

¹¹ A Weapon Task Plan consists of pre-launch instructions that are used by the weapon system for generating a flyout solution that places the EKV on an intercept path with the target RV. Such a plan is required before an interceptor is committed/launched to engage the threat.

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- An FY03 DAB will determine if the weapon system is ready for C1 production and deployment.

In the spring of 1998, the Ballistic Missile Defense Organization awarded the Lead System Integrator (LSI) contract to Boeing North American. Boeing¹² serves as the prime contractor for NMD system development and is responsible for integrating the NMD elements. In addition, Boeing is responsible for demonstrating and verifying system capability through integrated ground testing, integrated flight testing, and modeling and simulation.

¹² In this report, "Boeing" is synonymous to "Lead System Integrator."

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IV. TEST ADEQUACY AND RESULTS

A. TEST PROGRAM

The NMD Test and Evaluation Program is being planned and executed by the NMD Lead System Integrator, Boeing, under the direction of the NMD Joint Program Office. The test program is derived from the current NMD Test and Evaluation Master Plan (TEMP) and aims to demonstrate, incrementally, progress toward C1 capability by fulfilling the following objectives:

- Demonstrate end-to-end integrated system performance, including the ability to prepare, launch, and fly-out a designated weapon; and kill a threat-representative target through body-on-body impact.
- Demonstrate end-to-end target detection, acquisition, tracking, correlation, and handover performance.
- Demonstrate real-time discrimination performance.
- Demonstrate NMD system kill assessment capability.
- Demonstrate the ability of the NMD battle management software to develop and coordinate battle engagement plans; prepare, launch, and fly out a designated weapon, and kill a threat representative target.
- Demonstrate integration, interface compatibility, and performance of system and sub-system hardware and software.
- Demonstrate human-in-control operations of the NMD system.
- Demonstrate system lethality.

In the first three years of the NMD program – the Initial Development Phase – test events consisted of Integrated Ground Tests (IGTs) 3, 4, and 5; Integrated Flight Tests (IFTs) 1A, 2, 3, 4, and 5; Modeling and Simulation activities; Risk Reduction Flights (RRFs); and User Exercises. This phase culminates with the DRR. Near-term test and evaluation focuses on the ability to provide accurate test information and data in support of the DRR. Test and evaluation activities are also essential for the development and maturation of system elements.

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The NMD program activities following the DRR will focus on completing the development and deployment of the NMD C1 system. The test and evaluation activities during this period consist of Integrated Ground Tests, Integrated Flight Tests, Modeling and Simulation, Risk Reduction Flights, and User Exercises – as for the initial development phase – and are intended to support developmental activities and the FY01 and FY03 DAB decisions. The FY01 DAB will decide whether to proceed with the UEWR Upgrade, XBR build, and BMC3 integration into the Cheyenne Mountain Operations Center, and the FY03 DAB decision will decide if the weapon system is ready for production and deployment.

B. LIMITATIONS ON INTEGRATED FLIGHT TESTS

The flight test program has demonstrated basic functionality and interoperability of the NMD system. The most notable achievements have been the hit-to-kill intercept of IFT-3 and significant “in-line” participation in IFT-4 and IFT-5 by system elements. However, the configuration of the NMD system during both IFT-4 and IFT-5 remains a limited functional representation of the objective system, as discussed below.

Early integrated flight tests, like IFT-4 and IFT-5, make use of surrogate and prototype elements, because the NMD program is still in its developmental phase. As such, element maturity in near-term flight testing is limited:

- An interim build of the BMC3 – Capability Increment 3A – will be utilized in all integrated flight tests through IFT-6. It is a build with about 60% of the planned functionality but has the basic engagement functions necessary to execute a mission. The next build, Build Increment 1, may not add any new functionality but will begin the re-hosting of the software onto a Defense Information Infrastructure / Common Operating Environment and Joint Technical Architecture compliant architecture. IFT-7, scheduled in FY01, will be the first time Build Increment 1 is used in an integrated flight test.
- Defense Support Program (DSP) satellites, which provide launch warning to the BMC3 in the form of Quick Alert messages, act as the Space Based Infrared System element. DSP satellites are not able (and were not designed) to perform surveillance and boost track functions at the levels necessary to meet NMD ORD system effectiveness requirements, and therefore, will be replaced by SBIRS satellites. DSP messages are not currently in NMD tactical format and, during integrated flight testing, require message

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translation by range assets at the Joint National Test Facility¹³ before being forwarded to the BMC3.

- The Payload Launch Vehicle, a two-stage booster system consisting of modified Minuteman II motors and supporting subsystems, has been the surrogate for the interceptor booster in all integrated flight tests to date. The tactical booster¹⁴ was scheduled to be flown in IFT-7 (cf. Figure II-1), but schedule slips in Boost Vehicle testing have delayed the first flight of the tactical booster to IFT-8.
- The Ground Based Radar Prototype, located at Kwajalein Missile Range (KMR), supports integrated flight tests as the prototype element for the X-Band Radar. GBR-P participation in integrated flight tests is limited, because as discussed below, its siting at KMR precludes it from adequately supporting weapon task planning by the BMC3. As a result, Global Positioning System (GPS) instrumentation and/or a C-band transponder on the target reentry vehicle are the sources of information for weapon task planning by the BMC3.

In part, the operational realism of integrated flight testing has been limited by having located the GBR-P at KMR. As illustrated in Figure IV-1, the GBR-P is not sufficiently forward in the test geometry, as it would be in many operational scenarios,¹⁵ requiring that other sensors provide data to the BMC3 for weapon task planning. In the integrated flight tests conducted to date and for the foreseeable future, these "other sensors" are either GPS data sent from the RV and/or the FPQ-14 radar receiving data from a C-band transponder on the target RV. The FPQ-14 radar located on Oahu, Hawaii, picks up the C-Band signal radiating from the target RV and provides the BMC3 with target track information as though it were from a UEWR. Similarly, as in IFT-3 and IFT-4, the GPS can provide the BMC3 with target track information as though it were from an X-Band Radar. In tests to date, the BMC3 was required by the concept of operations to generate a Weapon Task Plan only after the threat object – the RV – had been resolved by ground based radars.¹⁶ Although the GBR-P acting as the XBR

¹³ The Joint National Test Facility is located at Shriever Air Force Base near Colorado Springs, Colorado.

¹⁴ The tactical booster is a Commercial-off-the-Shelf (COTS), three-stage, ICBM-class missile that has a burnout velocity nearly 2.5 times that of the PLV. Launched from central Alaska, the tactical booster must be powerful enough to engage threats, in a timely manner, targeted at the East Coast.

¹⁵ Missiles launched from eastern Asia would generally come into the X-Band Radar's field of view much earlier than in test scenarios. Missiles coming over the North Pole or from the Middle East would generally have to rely on other sensors for generating the Weapon Task Plan.

¹⁶ The NMD system is required to engage the threat under one of three "categories" of operation: (A) resolved and discriminated RV; (B) cluster track of threat complex; or, (C) space-based sensor data of boosting missile.

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surrogate can acquire the target *cluster* soon after radar horizon break, the GBR-P alone is not capable of supporting the Weapon Task Plan generation since the target RV cannot be discriminated early enough.

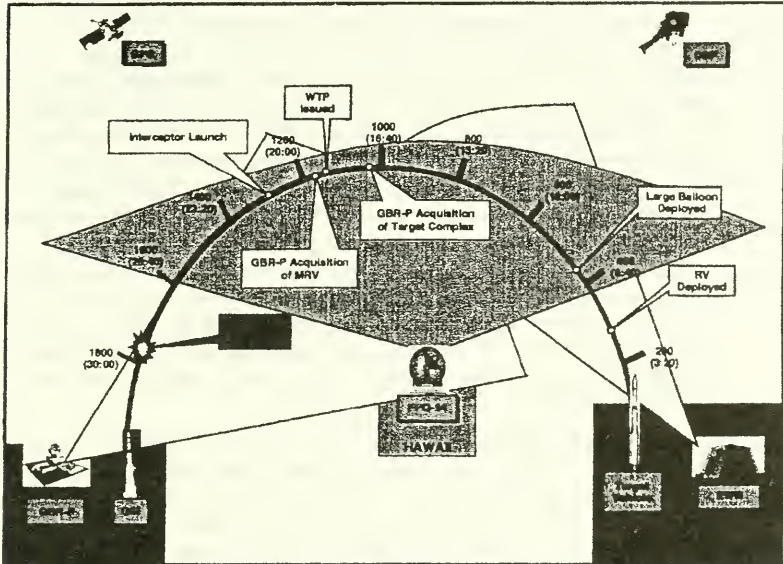


Figure IV-1. Integrated Flight Test Geometry

Another critical function performed by the BMC3 is the generation and uplink of In-Flight Target Updates (IFTUs) – target data sent to the EKV while in flight – to correct for any targeting errors. In the “on-line” portion of IFT-3, the GBR-P acting as the XBR surrogate was not required nor planned to be the sole provider of track data to the BMC3 for IFTU generation. Rather, GBR-P track data was augmented by FPQ-14 data for IFTU generation. GBR-P participation in IFTU generation – especially of IFTUs sent late in the engagement timeline – has increased in recent flight tests. In particular, the BMC3 generated all three IFTUs exclusively from GBR-P data in IFT-5.

Characteristic of ballistic missile defense flight tests, limitations associated with developmental testing impact the operational realism of integrated flight tests. Safety concerns about intercept debris and range constraints impose limitations on engagement scenarios. While a successful intercept during any future flight test will be a significant

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achievement in the development of the NMD system, it should be seen in context of the caveats enumerated above as well as the following limitations:

- **Engagement Conditions.** Test target launches from Vandenberg Air Force Base (VAFB) and interceptor launches from KMR place significant limitations on achieving realistic engagement conditions. A target missile cannot be launched from a "threat country" toward the United States. Test targets are outbound from the United States rather than inbound relative to early warning radars. Consequently, during flight tests, early warning radars track the target complex during phases of its flight different from what is expected during a true engagement. The target missile launched near the early warning radar presents an easy target for detection and is tracked during its boost phase. Other limitations on engagement conditions include the fact that interceptor flyout range and time of flight are short,¹⁷ intercept altitudes are low (for debris containment), and closing velocities during the endgame are not stressing. These limitations would be mitigated somewhat with the addition of a new test geometry to the flight test program: for example, target launches from Kauai or Wake Island and interceptor launches from Kodiak Launch Complex in Alaska, or target launches from Kodiak and interceptor launches from KMR.
- **Target Suite Reduction.** The target suites flown in IFTs 3, 4, and 5 each contained only two objects – a Medium Reentry Vehicle (MRV) and a Large Balloon – a significant reduction in complexity from the original plan. Target requirements listed in the JPO-signed 1997 TEMP called for nine to ten objects in flight tests IFT-1 through IFT-5, suites that contained both unsophisticated and sophisticated decoys. In 1998, target requirements were pared down to three balloons (one large and two small balloons) and the MRV. Then, in July 1999, less than three months before IFT-3, the target suite was further reduced to two objects, as indicated above. In all cases, the deployment bus is in the field of view of the EKV seeker and also has to be discriminated.
- **Target Suite Complexity.** The NMD test program is designed to test within the C1 threat space, which means that target suites in flight tests will have at most unsophisticated countermeasures, even though the threat from accidental or unauthorized launches could employ sophisticated countermeasures. Currently, the most stressing intercept flight tests will fly target suites consisting of a mock warhead and a collection of simple balloon decoys. The target suites flown in IFT-3, IFT-4, and IFT-5 were each limited to an MRV

¹⁷ An issue related to the short interceptor flyout is that the COTS booster is nearly too powerful for flight testing with short GBI flyout ranges. The LSI and JPO are considering options – e.g., not firing the third stage or initiating extreme general energy management – to resolve this issue.

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and a Large Balloon. Signature simulations show that since the large balloon and deployment bus have IR signatures very dissimilar to the MRV, the EKV can easily discriminate the MRV from these objects.

- **Multiple Simultaneous Engagements (MSE).** NMD system performance against multiple targets is not currently planned for demonstration in the flight test program, although multiple engagements are expected to be the norm in NMD system operation. The Joint Program Office has plans for constructing a second interceptor silo at Kwajalein Missile Range as well as a second missile silo at VAFB, therefore, some of the additional infrastructure cost for performing such testing is already in the NMD budget. From a technical viewpoint, Multiple Simultaneous Engagement testing is considered essential for the following reasons:
 - There may be unanticipated synergistic effects between simultaneously deployed EKVs; many questions or issues simply cannot be resolved from the testing of 1-on-1 engagements. Debris, BMC3 workload, discrimination, etc., all make extrapolating from 1-on-1 to more likely scenarios uncertain.
 - Effectiveness requirements pertaining to M-on-N engagements will be carried out through modeling and simulation. In order to have traceability to the real world, these simulations need “anchoring” and validation from M-on-N flight-testing.

Operational engagements for the NMD C1 System are expected to cover a much larger engagement space than what can be achieved during integrated flight tests. Figures IV-2, IV-3, and IV-4 illustrate the differences. Figure IV-2 shows that targets launched from VAFB in California toward KMR in the Western Pacific occupy one point of the target-apogee vs. target-range parameter space. Figure IV-3 underscores the fact that interceptor flyout in the VAFB-KMR engagement is on the very low end of the engagement space – a flyout range of roughly 700 kilometers – and at a fixed intercept altitude of 230 kilometers. And, Figure IV-4 compares the flight envelope – closing velocity vs. interceptor ground range – of the test program to that of the C1 engagement space. The engagement space of the test program occupies nearly a single point.

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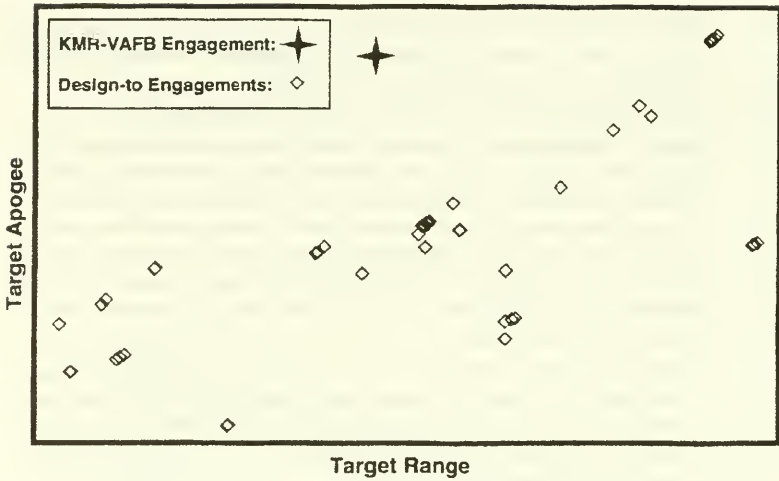


Figure IV-2. Target Apogee vs. Target Range Parameter Space

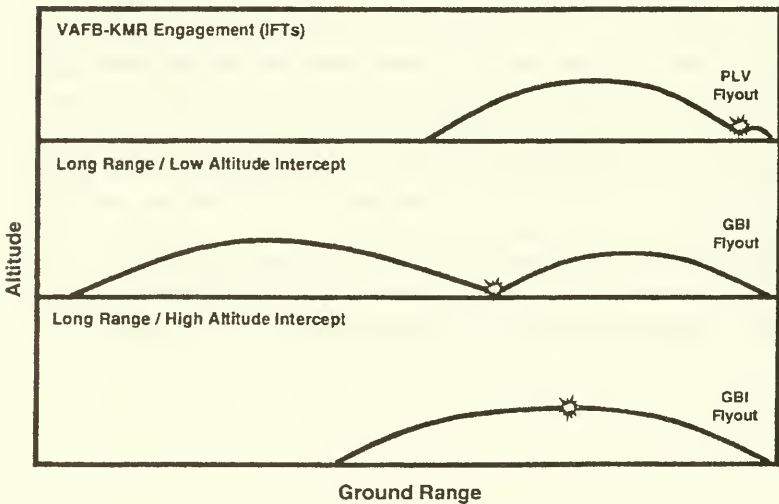


Figure IV-3. Interceptor Flyout Comparisons

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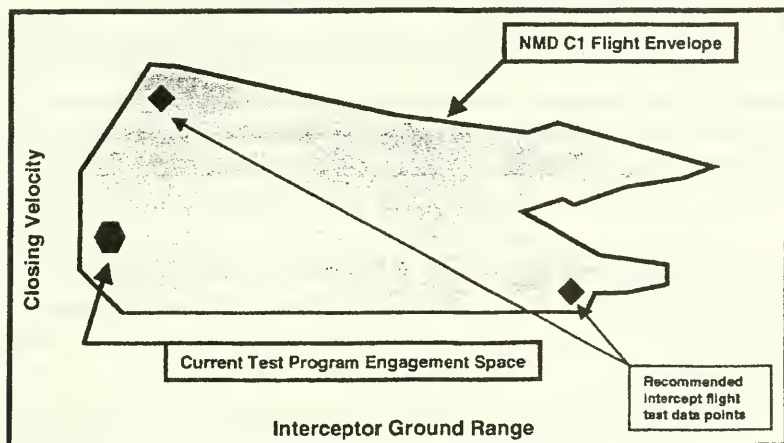


Figure IV-4. Closing Velocity vs. Interceptor Ground Range Parameter Space

Integrated ground testing using simulated environments and full threat scenarios will be used to evaluate the performance and effectiveness of the NMD C1 system throughout the engagement envelope. These ground activities, along with modeling and simulation, are planned to mitigate flight test limitations described above. Unless additional points in the flight envelope of Figure IV-4 are flown in integrated flight tests, the scope and validity of system performance estimated in ground testing would remain limited.

C. FLIGHT TEST RESULTS

1. Integrated Flight Test 1A – Boeing EKV Flyby

Integrated Flight Test 1A (IFT-1A), conducted on 24 June 1997, was the first flight test of the NMD Test Program. A test was attempted in January 1997 (IFT-1) but was aborted because the surrogate for the ground based interceptor booster failed to launch. The primary objective of IFT-1A and the subsequent test, IFT-2, was to provide a basis for down-selecting candidate EKV's built by competing contractors, Boeing and Raytheon.

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IFT-1A assessed the performance of the Boeing EKV sensor, collected phenomenological data used for post-test analysis of the onboard discrimination algorithms, and collected functional data on the dynamic flight-test environment and its effects on the EKV. Range assets and surrogate hardware – GPS and the FPQ-14 radar tracking a C-band transponder – were used to guide and deliver the EKV to a point in space where it began executing sensor functions; the BMC3 element played no role in the execution of IFT-1A. Since the EKV did not have propulsion capabilities, it was incapable of intercept but came to within 5200 ft of the target reentry vehicle.

The principal component of the Boeing EKV design is a multiple-waveband IR sensor that allows the EKV to acquire, track, and collect data on objects of the representative threat target suite. The sensor payload consists of a focal plane array of highly sensitive silicon-based sensors and a cryogenic cooling assembly at the end of an optical telescope.

The EKV sensor payload was launched from Meck Island in the Kwajalein Atoll and set on a trajectory that permitted it to view a pre-planned target scene. The target suite was launched from VAFB using a specially configured Minuteman II booster and consisted of nine objects: one medium reentry vehicle, two medium rigid light replicas, one small canisterized light replica, two canisterized small balloons, two medium balloons, and a large balloon. Viewing objects of the target suite, the EKV seeker successfully gathered signature and phenomenology data which, in turn, were used to verify predictions made by corresponding models and simulations. One of the medium balloons did not fully inflate.

- Nine of ten objects of the target suite (including the deployment bus) were detected, acquired, and tracked. For some unknown reason, one of the canisterized small balloons was not observed. As stated in the GBI 60-Day Report for IFT-1A, "No object detected on the focal plane could be correlated with the white canisterized small balloon; therefore, no seeker measurements for this object are available."
- Space (exoatmospheric) operation of the silicon seeker was verified.
- The EKV seeker collected IR signature data that were downlinked to ground receiving stations. Predictions from target signature models match seeker measurements acquired in flight for both IR bands.
- Using IR signature data collected by the EKV, post-test execution of discrimination algorithms were able to discriminate successfully the medium reentry vehicle as the threat object of the target suite. The successful discrimination of the medium reentry vehicle should not viewed as a

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verification of the discrimination algorithms in an operational engagement, but rather, as a successful experiment.

2. Integrated Flight Test 2 – Raytheon EKV Flyby

Integrated Flight Test 2 (IFT-2) conducted on 16 January 1998 was the second flight test of the NMD Test Program. The objectives of IFT-2 were the same as that for IFT-1A, namely, to assess the performance of the EKV sensor built by the second EKV contractor, Raytheon Missile System Company. The same target suite of nine objects was flown.

EKV seeker data was downlinked and used for evaluating sensor performance and for performing post-test discrimination and signature analyses of the target suite. Range assets and surrogate hardware – GPS and the FPQ-14 radar tracking a C-band transponder – guided the EKV to a point in space where it began executing sensor functions; the BMC3 element played no role in the execution of IFT-2. As in IFT-1A, the Raytheon EKV did not attempt to intercept the medium reentry vehicle since it had no propulsion capabilities.

The principal component of the Raytheon EKV design is a multiple-waveband, Visible/IR sensor payload that allows the EKV to acquire, track, and collect data on objects of the representative threat target suite. The sensor payload consists of a HgCdTe focal plane array and a cryogenic cooling assembly at the end of an optical telescope. As in the launch of the Boeing EKV, the Raytheon EKV sensor payload was launched from Meck Island at KMR and set on a trajectory that permitted it to view a similar target scene of ten objects (nine objects of the target suite plus the deployment bus). And, as in IFT-1A, one of the medium balloons did not fully inflate.

IFT-2 was successful in collecting target object data, and post-test analyses demonstrated that the MRV could be discriminated from the other objects of the target suite. Because the discrimination algorithms were not executed in real time and relied on simulations that were anchored by IFT-2 test data, the successful discrimination of the medium reentry vehicle should not be viewed as a verification of the discrimination algorithms in an operational engagement, but rather, as a successful experiment.

At the recommendation of the Lead System Integrator (Boeing North American), the NMD Joint Program Office opted to down-select to a single EKV design prior to IFT-

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3, which afforded more intercept test opportunities before the DRR. The Joint Program Office selected Raytheon as the EKV contractor over Boeing.¹⁸

3. Integrated Flight Test 3 – Intercept Achieved

The first NMD *intercept* attempt of a target reentry vehicle by the Raytheon-built EKV was successful, albeit with significant limitations to operational realism, on 2 October 1999. IFT-3 began with the launch of a Minuteman-based booster from VAFB and the subsequent deployment of its target payload – MRV and Large Balloon – for reentry near KMR. An interceptor was launched from Meck Island to engage the MRV, and EKV intercept of the MRV occurred at an altitude of 230 km, 1782 seconds after target liftoff. IFT-3 was planned and jointly executed by the NMD Joint Program Office and Boeing, the LSI. Future flight tests will be planned and executed by Boeing.

IFT-3 was an element test of the Raytheon-built EKV, not an Integrated System Test. IFT-3 was comprised of two concurrent test activities: an “in-line” test that focused on the performance of the EKV, and a simultaneous “on-line” or shadow test that focused on assessing NMD functionality as an integrated system using prototype elements that approximate the objective system. The principal objective of the on-line test was to demonstrate integration and operation of system elements as a risk reduction effort for future flight tests, IFT-4 and IFT-5.

IFT-3 In-Line Test (EKV Flight Test)

The in-line or flight test part of IFT-3 was a test of the Raytheon-built EKV. GPS track information of the target RV was used to guide and deliver the EKV to a point in space where it began executing mission-critical functions: midcourse guidance, target-complex acquisition, real-time discrimination, target selection, active homing, and intercept. Although the EKV successfully intercepted the MRV, acquisition of the target complex by the EKV was accomplished in an off-nominal manner because of a malfunctioning Inertial Measurement Unit (IMU) onboard the EKV. The IMU problem was caused by a vendor calibration procedure error, which was corrected for IFT-4.

Because of the problem with IMU operation, the EKV was forced to utilize its “step-stare” capability that comes on-line only during off-nominal situations.

¹⁸ Originally, the EKV down-selection was to occur after IFT-3 and IFT-4, intercept attempts of a target RV by the Boeing and Raytheon EKV's, respectively.

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- The IMU was unable to measure angular position (pointing) of the EKV with sufficient accuracy to allow for nominal target acquisition. Large angular slew rates of the EKV, performed during star shots to refine angular navigation, were directly responsible for the malfunction of the IMU. The anomalous behavior of this IMU should not be seen in future flight tests, because a new tactical IMU – built by Fibersense – will be used in the C1 EKV design and flown in integrated flight tests beginning with IFT-6 in January 2001.
- When the EKV “opened its eyes,” no object of the target complex was in its field of view. The EKV executed the “step stare” procedure to extend its field of view and, subsequently, acquired the Large Balloon, deployment bus, and MRV. Had the Large Balloon not been deployed with the target suite, the EKV probably would have acquired the deployment bus and, subsequently, acquired and intercepted the MRV.
- Discrimination and target selection of the MRV from the Large Balloon and deployment bus were successfully accomplished. The guidance, navigation, and control functions were performed without incident and resulted in the intercept of the MRV.

IFT-3 On-Line Test (Shadow Test)

The on-line portion of IFT-3 ran in parallel with the in-line test to assess the performance of NMD functionality as an integrated system using prototype and surrogate elements. Elements operating on-line did not affect the operation of the in-line test but did demonstrate NMD functionality in a configuration more representative of the integrated system to be deployed. The most notable results of the IFT-3 on-line test pertained to BMC3 and GBR-P performance.

The BMC3 successfully demonstrated integrated system performance through the coordination of system elements operating in shadow mode. It performed engagement planning that ultimately led to a successful (simulated) mission. GBR-P performance was generally poor and unsuitable for anchoring associated radar simulations. GBR-P track quality was adversely affected by a software error in the antenna mount motion equation. A software fix was implemented and later verified in the target of opportunity flight, RRF-7, which was conducted in November 1999, IFT-4, and IFT-5.

4. Integrated Flight Test 4 – Intercept Not Achieved

Integrated Flight Test 4, which was conducted on 18 January 2000, was the first *end-to-end* NMD flight test attempting a hit-to-kill intercept of a target reentry vehicle.

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Whereas IFT-3 was an element test of the Raytheon-built EKV, IFT-4, using surrogate and prototype elements, strived to demonstrate NMD system integration in a configuration more representative of the system to be deployed. In particular, both the BMC3 and the GBR-P participated in the flight test "in-line." The FPQ-14 radar located in Oahu, Hawaii, was to have used the C-Band transponder data from the MRV to provide the BMC3 with target track information as though it were from a UEW. The FPQ-14 data, however, was (erroneously) judged in real time to be of poor quality. Instead, GPS track data of the MRV was used in IFT-4 after being translated into XBR format. The geometry of the test scenario of IFT-4 was identical to that of IFT-3.

The EKV failed to intercept the MRV, a failure directly traceable to the cryogenic cooling system of the EKV. The primary cooling line that delivers krypton to the IR focal plane arrays was restricted with either frozen moisture or contamination, and the IR sensors were prevented from cooling down to their operating temperatures. Consequently, the IR sensors did not acquire or track target objects for terminal homing and intercept.

IFT-4 demonstrated the successful operation and integration of NMD elements. Data analysis of IFT-4 has been completed, and the following assessment of test results can be made:

- **Battle Management, Command, Control, and Communications.** The non-tactical flight test version of the BMC3 operated in a fully functional, dual node configuration (Commander-in-Chief and Site). In particular, the BMC3 demonstrated end-to-end tracking of the target complex and successfully generated Weapon Task Plans, Sensor Task Plans, one of three In-Flight Target Updates, and a Target Object Map.
- **Defense Support Program.** DSP satellites successfully acquired the boosting Minuteman II target vehicle and sent Launch Alert and Boost Event Reports to the BMC3.
- **Early Warning Radar Test Article.** Post-mission analysis indicates that the EWR provided the BMC3 with sufficiently good track data of the target cluster for successful GBR-P cueing. It must be noted, however, that the EWR test article is located up-range and has the advantage of tracking targets at close range as opposed to longer ranges expected in typical NMD engagements. At close range, the radar return signal is large, which enables the radar to generate higher quality tracks of deployed objects.
- **Ground Based Radar-Prototype.** The GBR-P participated in IFT-4 as a surrogate X-Band Radar element. Its participation in IFT-4 as an *integrated* element of the system was limited, since its track data and discrimination

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information was not utilized by the BMC3 for the generation of the Weapon Task Plan. The GBR-P was successful in many respects: it acquired the target complex, tracked and resolved all objects of the target complex, and correctly discriminated all tracked objects as either tank-like, debris, or RV. In addition, the GBR-P supplied track information used by the BMC3 for the generation of one IFTU.

5. Integrated Flight Test 5 – Intercept Not Achieved

Integrated Flight Test 5 was conducted on 8 July 2000. It was to be an end-to-end NMD intercept flight test nearly identical to IFT-4 and aimed to demonstrate NMD system integration with surrogate and prototype elements in a configuration representative of the system to be deployed. The most prominent new feature of the test was the participation of the In Flight Interceptor Communications System as the communication link between the BMC3 and EKV. As in all previous intercept tests, a Minuteman-based target system was launched from VAFB, and its target payload consisting of an MRV was deployed for reentry near KMR. The target payload also included a Large Balloon, but it was never deployed because of some unknown failure of the deployment mechanism. Then, at 1294 seconds after target liftoff, an interceptor was launched from Meck Island to engage the MRV. The planned intercept, which did not occur, was to have been at an altitude of 230 km, 1782 seconds after target liftoff, identical to the planned intercepts on IFT-3 and IFT-4.

The failure to intercept the MRV is the direct result of the EKV not separating from the upper stage assembly of the Payload Launch Vehicle, the surrogate for the interceptor booster. Preliminary failure analysis of the telemetry data indicates that the EKV did not receive a second-stage burnout message, a prerequisite for initiating the separation sequence. The cause of this failure has not yet been determined but appears to be isolated to the Payload Launch Vehicle. A notable consequence of the failure is that all EKV events subsequent to separation, e.g., sensor operation and divert and attitude activities, did not occur. Therefore, none of the EKV primary objectives were met.

The FPQ-14 radar located at the Kaena Point Satellite Tracking Station in Oahu, Hawaii, which tracked the C-Band transponder on the MRV, played an important role in IFT-5. Unlike IFT-4 in which GPS track data was the source for Weapon Task Plan generation, the BMC3 generated the Weapon Task Plan using FPQ-14 transponder data. GPS was still used, however. The FPQ-14 data, prior to being used to generate the Weapon Task Plan, was checked against the GPS track for accuracy; GPS data could

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have been used in the event that FPQ-14 data was of poor quality.¹⁹ The Weapon Task Plan directed the launch of the interceptor at 1294 seconds TALO.

The GBR-P, the prototype X-Band Radar, successfully participated in IFT-5 as an integrated element of the system. It received target cluster cues from the BMC3, tracked all objects of interest, and correctly performed real-time discrimination on all target objects. The GBR-P tracking and discrimination timeline of IFT-5 closely matched the timeline predicted by pre-mission simulations, except that MRV acquisition occurred earlier than predicted. GBR-P participation in integrated flight tests is increasing. In IFT-5, all In Flight Target Updates (IFTUs) including the backup IFTU were generated solely from GBR-P track data. However, GBR-P track data was prevented from entering the BMC3 element until after the Weapon Task Plan had been sent to the Weapon System and, therefore, did not contribute to Weapon Task Plan generation.²⁰

IFT-5 demonstrated integrated system performance through the operation of the non-tactical, flight-test version of the BMC3. The BMC3 provided end-to-end tracking of the target complex utilizing multiple sensor sources and demonstrated all operations of engagement planning and real-time communications. It successfully generated the Weapon Task Plan, Sensor Task Plans, Communication Task Plans, and IFTUs. Failure of EKV operation precluded the successful in-line operation of the IFICS – closure of the BMC3-EKV communication link – and, thus, associated objectives were not fully achieved, e.g., the receipt of In Flight Status Reports from the EKV were not evaluated. System integration of early warning elements with the BMC3 was achieved: DSP satellites successfully acquired the boosting Minuteman II target vehicle and sent Quick Alert and Boost Event Reports to the BMC3. The EWR also acquired and tracked the target complex, including spent fuel tanks, early in the mission timeline.

D. INTEGRATED GROUND TESTS

Boeing is performing ground testing to mitigate the risks associated with the limited flight test program. Ground testing can exercise the system through variation of threat characteristics such as launch point, aimpoint, trajectory, apogee, number of RVs, target type, and environmental effects. This ground testing is done in month-long phases

¹⁹ In IFT-4, the FPQ-14 transponder track data was judged to be of unsatisfactory quality and, therefore, only GPS data was used to generate the Weapon Task Plan.

²⁰ The GBR-P is unlikely to resolve and discriminate the RV from other objects in the target cluster early enough to generate a weapon task plan. The test plan for all intercept tests to date call for launching the interceptor only after the RV has been resolved and identified.

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called Integrated Ground Tests. IGT-4 and IGT-5 occurred in 1999; IGT-6 will not occur until after the DRR.

These ground tests use the Integrated System Test Capability (ISTC) at the U.S. Army Space and Missile Defense Command's Advanced Research Center in Huntsville, Alabama. ISTC provides test execution and control, threat and environment data, and test drivers for some NMD elements. Each NMD element is represented at a standalone computer station called a node. Each node incorporates system element mission and communications processors, which run prototype element software. ISTC supplies the nodes with simulated inputs – threats and associated environments, natural and man-made – which are nominally consistent for each NMD element in the scenario.²¹

IGTs use a combination of models, software-in-the-loop, and hardware-in-the-loop to test the NMD engagement space and threat in an operational environment. They are supposed to validate the functionality and functional interfaces between the elements, subject the system to stressing environments and tactical scenarios, and evaluate target-intercept boundary conditions. IGTs can help to identify “unknowns” in an interactive system context and verify interoperability of NMD system elements.

There was very little operational hardware or software used in IGT-4 or IGT-5. The BMC3 was a prototype, flight-test version of the operational BMC3; it included some real communications hardware (T1 links). It is *possible* that some of the software in the UEWR representation could eventually be used in the operational UEWR. Also, some of the EKV digital signal processing software and data processing software might be used in the operational EKV.

The element hardware components are represented digitally in the Processor Test Environment. It duplicates the real-time tactical interfaces in order to inject the perceived data into the test article. For example, the Processor Test Environment for the GBR-P element contains simulation software that represents the transmitter, receiver, antenna, signal processor, measurement generation, beam volume, detection response, and radar status.

IGT-4 and IGT-5 had a number of limitations. For example, the threat apogees were unrealistically high in IGT-4, which provided optimistic assessments of timelines and radar detections. Because the simulation had limited processing capability, Boeing (LSI) eliminated most of the threat objects in many of the scenarios, which was

²¹ One exception is the gravity model, which is different for the EKV and the other elements.

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unrealistic for testing discrimination, radar resource management, and BMC3 processing capabilities. In addition, all of the element representations suffered from limitations that produced significantly different performance than is expected from the NMD C1 system. These limitations included, but were not limited to:

- Only five high-fidelity representations of the EKV were available. There were 15 low fidelity models, but the two representations could not be used together. Thus, a full-up scenario involving multiple RV attacks could not be represented.
- UEWR representations did not include pulse integration, leading to lower than expected signal-to-noise ratios and objects not being tracked.
- UEWR tracking accuracies often failed to meet specifications.
- The XBR was represented by a modified GBR-P model that differed in power-aperture product, field-of-view, sensitivity, slew rate, etc. Work-arounds such as increases to target cross sections were implemented to mitigate some, but not all, of these limitations.

The primary goal of IGT-4 and IGT-5 was to demonstrate the integration of BMC3 with the UEWR and XBR. Boeing successfully demonstrated integration between these three NMD elements in the two IGTs. The secondary goal of the IGTs was to assess the C1 architecture and performance against a limited set of C1 scenarios. This goal was less successful, in part because of the immaturity of the element representations in IGT-4 and IGT-5. The exact amount attributable to element model immaturity is currently undefined and will remain so until truly element-representative models are installed in ISTC.

Boeing demonstrated integration between the BMC3 and radars by generating and recording messages between the elements. They confirmed that the planned messages had been exchanged between the BMC3 and the GBR-P and UEWR, and measured the time delays between the messages.

The radar performance in IGT-4 and IGT-5 was generally poor. In IGT-4 the XBR had reasonable position track performance but the velocity track performance was much worse than specifications. The XBR improved in IGT-5 and usually met the track accuracy performance. The UEWR failed to detect a significant number of RVs in IGT-4 and IGT-5. Once an RV was acquired, the performance of the UEWR representation at a given time was generally much better than specifications in both position and velocity tracking. However, the UEWR rarely succeeded in maintaining the specified track accuracies against RVs throughout an engagement. The probability of track maintenance

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was well below the NMD system specification requirements for both the XBR and UEWR. The XBR discrimination results were also well below the NMD system specification requirements.

The ISTC hardware and software used to date in the IGTs are immature and do not provide an adequate representation of the NMD C1 architecture. None of the major NMD elements – BMC3, XBR, UEWR, Weapon System, and DSP/SBIRS – is mature enough to provide a good assessment of the C1 system. The 1997 TEMP discussed the consequences if the representations were not mature before the DRR: “The validity and credibility of the surrogates and the representations must be fully characterized with respect to the NMD system and element requirements prior to making any decisions based on data drawn from tests using these systems. Without this information, the results of the tests will be inconclusive at best and misleading at worst.” IGT-4 and IGT-5 did demonstrate the integration of the BMC3 with the UEWR and XBR (not with the weapon system, however), but these tests will provide only limited data to support an evaluation of the effectiveness of the proposed NMD C1 system at the DRR.

E. BATTLE PLANNING EXERCISE 99-5 AND BMC3 ASSESSMENT

Battle Planning Exercise 99-5 (BPEx 99-5) was conducted in the BMC3 Element Laboratory at the Joint National Test Facility on 28-30 September 1999. Conceived in 1998 by US Space Command (USSPACECOM/J35), BPEx events enable the User to examine and assess as-built BMC3 operational functionality for the purpose of influencing future development of the BMC3 element. The OTA Team was invited by USSPACECOM to co-lead BPEx 99-5 to benchmark BMC3 behavior in support of the Deployment Readiness Review.

The primary objective of BPEx events is to identify operational defects of the BMC3 element to be corrected in future builds. BPEx 99-5 was performed, in particular, to evaluate BMC3 element behavior in support of the OTA Team's early operational assessment of Key Performance Parameters #2 and #3 – human in control (HIC) and automated battle management – for the DRR. The evaluation of Key Performance Parameter #1, effectiveness of the NMD system to defend the US against ballistic missile attacks, was not an objective of BPEx 99-5. The test environment representing the NMD system consisted of the following components:

- Two representative nodes of the BMC3 element – CINC and Site – running Capability Increment 3A software.

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- Trained military personnel – from USSPACECOM, NORAD, Army Space Command, and Air Force Space Command – were assigned specific roles as BMC3 operators during the exercises. These operators are known as “Smart Rounds” and underwent intensive training before the exercises were conducted.
- A “simulation cell” provided simulated external input from the national command authority (NCA) and ITW/AA to the CINC BMC3 node.
- The BMC3 Test Exerciser simulated the remaining elements of the NMD system: DSP/SBIRS, Upgraded Early Warning Radar, X-band radar, and the Weapon System.

Notable BMC3 Behavior

The following BMC3 behavior was observed during BPEx 99-5 execution:

- **Phantom Tracks (Track Splitting).** For scenarios in which the tracking of a threat object transitions from the XBR to a UEW, the correlation algorithms of the BMC3 treat the UEW returns as originating from a new, lethal object. In other words, the track of the “old” threat object splits into two tracks thereby creating a phantom track. Whenever there is sufficient battlespace for an engagement, the BMC3 battle manager would automatically allocate interceptors against this phantom object.
- **Battlespace (Time-to-Go) Bars.** The BMC3 software provides visual displays – blue horizontal bars – illustrating the time that remains for engaging a given threat object. These “time-to-go” graphics bars did not provide accurate situational awareness to the operator, because kinematic capability of the interceptor is the only constraint defining the time-to-go. The graphics bars do not reflect limitations from solar exclusion, IFICS loading, interceptor launch rates, intercept spacing, and nuclear weapons effects avoidance, for example.
- **Kill Assessment.** Whenever the BMC3 cannot make a kill assessment for a given engagement – because of a lack of radar coverage – an alarm is sounded and the target is treated as a “leaker.” With the current radar architecture, kill assessments are frequently not available. Hence, the operator is led to believe that there are actual leakers and is dependent upon nuclear detonation reports from external sensors for situation awareness.

BMC3 Assessment

The BMC3 element is currently at an early stage of development and noted shortcomings are likely to be addressed before the planned initial operational capability

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in FY05. NMD operators had difficulty with resource management, engagement control, and situation awareness.

- **Resource management.** In the majority of scenarios, more interceptors than nominally required by the ORD were expended to defeat threat objects. For example, in a scenario with two RVs, 15 interceptors were launched. The reason for such behavior is two-fold:
 - Interceptors were launched against phantom tracks.
 - The BMC3 was very conservative during the exercises. Anything with a lethality-value greater than 0.02 (out of a maximum of 1.00) was engaged.
- **Engagement control.** When NMD operators believed that interceptors were allocated against phantom tracks, they tried a variety of techniques to override the automated battle manager to prevent the launch of interceptors.
 - Management-by-exception (MBE)²² holds were placed on phantom tracks to prevent interceptors from being launched. Although such actions should have worked, they were unsuccessful in all cases. The system simply was not behaving according to operator actions. In any event, MBE was not intended by BMC3 developers to be used as a resource management tool.
 - The only successful technique used to prevent interceptors from being launched against phantom tracks was to allocate all remaining interceptors to reserve status.
- **Situation Awareness.** BPEx 99-5 indicated a lack of situation awareness on the part of NMD operators.
 - As mentioned above, battlespace graphics bars did not give NMD operators an accurate estimation of all times a threat object could be engaged. Engagements with short timelines were most problematic. There were scenarios for which the battle manager did not allocate interceptors – because the system did not have the battlespace to engage the threat – even though the associated graphics bars indicated positive battlespace. This was particularly frustrating to the operators who could not control the engagement to launch interceptors.
 - The possibility of phantom targets stemming from radar-to-radar handover tended to make NMD operators anxious. There was no tool that could definitively warn operators when a phantom track appeared, so the

²² MBE is defined as the capability of the Human-in-Control to make inputs influencing the system engagement behavior on a track by track basis.

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- operators were forced to rely on their judgement in this regard. In the end, the operators tended to discount information derived from the UEWRs.
- The identification of threat objects as leakers for engagements without KAs forced operators to speculate on whether the engagement was successful.

The LSI is developing the BMC3 with maximum automation. Inherently, the BMC3 is designed to preclude direct launch control by the operator. Rather, positive control is exercised through Rules-of-Engagement development, battle-planning development, and management by exception. The BPEx, therefore, reflects the outcome of these efforts and can be frustrating to an operator attempting real time control.

F. MODELING AND SIMULATION

Restrictions on realistic operational flight testing force the T&E program to rely heavily on integrated ground testing and the execution of digital simulations for assessing the operational suitability and effectiveness of the NMD system concept. Integrated ground testing was of limited utility, as discussed in Section IV.D, in assessing the potential performance of the NMD system. Late delivery of LIDS – a high fidelity, system-level digital simulation of the NMD system – precluded its use for making a credible assessment of potential NMD system performance.

LIDS model development is taking much longer than expected. It was to be the principal digital simulation tool providing DRR support. Modeling and simulation in general and LIDS in particular were supposed to be employed to repeat hypothetical experiments in order to improve the statistical sample and to determine the values of key technical parameters unable to be measured by testing. Boeing released a beta version LIDS Build 4 at the end of April 2000. There was not enough time before the DRR to accredit LIDS and perform the required system analyses. As a result, the Service Operational Test Agencies do not have a simulation that they can use to assess the potential system effectiveness.

LIDS build 4 has serious limitations, so even if it had been released on time there would still be major issues in using LIDS to assess the potential performance of the NMD system. One problem is that LIDS users will not be able to generate their own scenarios. Boeing will provide users with canned scenarios, including fixed launch points, aim points, ICBMs, debris, and apogees. The Operational Test Agencies had been planning to run hundreds of digital simulation scenarios, varying such parameters as raid size, trajectories, atmospherics, debris, nuclear effects, threat launch and impact points, threat

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types, and Penetration Aids (PENAIDS). LIDS will not have the flexibility to support such studies.

LIDS will allow users some flexibility. They will be able to change the location and number of the various NMD elements. Users will also be able specify such parameters as the reliability of GBI boost phase completion, the probability of target acquisition by the EKV sensor, the probability of the EKV correctly identifying the RV, the probability of hitting the RV given correct discrimination, and the probability of killing the target given a hit. Such analyses will be useful but not sufficient to adequately assess the potential performance of the CI system.

LIDS does not simulate any of the element prototypes or surrogates currently used in flight testing. Consequently, use of the IFTs to provide traditional model validation data will not be possible until the actual system elements finally work their way into the intercept flight test program. This limits the confidence that can be placed on LIDS predictions in the foreseeable future.

Boeing is using a number of low-fidelity simulations in their development of the NMD system. One is NMDSim, which estimates the interceptor launch windows for different scenarios. The NMDSim does not simulate discrimination functionality, does not generate weapon task plans, has no interceptor flyout representation, and does not perform kill assessment. It can be a useful tool for planning engagements in higher-fidelity models or simulations, but it is too limited to credibly assess the potential performance of the NMD system.

G. LETHALITY TESTING

NMD lethality testing and analysis activities before the DRR have focused on the development and accreditation of version 8.1 of the Parametric Endo-Exoatmospheric Lethality Simulation (PEELS). PEELS is the only lethality simulation to be accredited for endgame evaluation of NMD intercepts. In effect, it is the simulation used in both lethality and effectiveness analyses to assess whether an NMD hit on a threat target results in a target kill. To develop an NMD-capable version of PEELS, the database of empirical results that anchors the simulation for theater ballistic missiles had to be expanded to include lethality information for intercepts of NMD-type targets by the EKV in the velocity regime expected for NMD engagements. Because there is no capability to run ground tests at the upper end of NMD intercept velocities, a series of hydrocode analyses were used to generate the bulk of the "empirical data" for NMD EKV intercepts.

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A total of 490 hydrocode simulations are planned, covering the quarter-scale Light Gas Gun test projectile, warhead and aeroshell damage, and different threat targets and intercept parameters. Of these, 218 have been completed to date, namely, 178 for the Attitude Control Reentry Vehicle target and 20 for Medium Lethality Reentry Vehicle target. The main purpose of the quarter scale Light Gas Gun series was to generate instrumentation data and damage data, which are used to anchor the hydrocode prediction methodology for varying hit points, velocities, and impact angles.

A series of 20 quarter-scale light-gas-gun impact tests were conducted at the Arnold Engineering Development Center in Tennessee in 1999 against Attitude Control Reentry Vehicle targets, and a second series of 20 shots have begun testing in FY00 against the Medium Size Reentry Vehicle, Long Range Nuclear Threat, and Attitude Control Reentry Vehicle targets. These tests employ a quarter-scale surrogate of the EKV launched against a quarter-scale replica of the target at a nominal velocity of 7 km/s. FY99 test results are described in the U.S. Army Space and Missile Defense Command Test Report.²³ A report comparing test results to hydrocode predictions, originally scheduled for publication in April 2000, is still pending.

Besides providing a backup for the hydrocode prediction methodology, the 1999 tests provided the following information:

- The damage capability of the EKV against the Attitude Control Reentry Vehicle payload for a variety of intercept conditions (two different impact velocities, five different impact angles, and various hit locations on the target).
- The sensitivity of damage level to impact velocity (two different impact velocities).
- The validity of the lethality criteria used in the NMD-capable version of PEELS for the tested intercept conditions.
- The post-impact debris characteristics.
- The sensitivity of the lethality results to different target fabrication techniques.

Additional testing is being done to improve and validate the hydrocode simulations. Sandia National Laboratory is conducting a set of high-speed impact tests using a three-stage Light Gas Gun to develop the equations of state – the characterization of the physical phenomena that occur during impact – of several aerospace materials

²³ USASMDC, *Classified Detailed Test Report for the NMD Quarter-Scale Light Gas Gun Lethality Tests of the Exoatmospheric Kill Vehicle Surrogate Against the Attitude Controlled Reentry Vehicle Target*, Books 1&2 (U), 15 February 2000.

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present in the test targets and EKV at impact velocities of 6 km/s and 12 km/s. The materials studied are silica phenolic, E-glass, and graphite epoxy. Testing is expected to be completed later this year. If significant differences between the new empirically-derived equations of state and inputs used for the hydrocode runs are found, the hydrocode analysis will be corrected and PEELS modified accordingly. Results to date suggest that such modifications will not be necessary.

Sandia is also performing a series of hydrocode analyses for the Attitude Control Reentry Vehicle and Medium Target Reentry Vehicle targets. Their objective is to characterize the lethal volume for aerothermal structural kills. Aerothermal structural kills could occur if the target incurs sufficient damage from an EKV impact and suffers aerothermal demise during atmospheric reentry. As of March 2000, 93 hydrocode runs had been made. The analyses are expected to continue through 2000.

Based on the accumulated data from lethality tests and analyses, PEELS 8.1 was accredited by the Accreditation Working Group (AWG) on 4 April 2000. In the accreditation report dated 28 April 2000,²⁴ the AWG recommends accreditation of PEELS 8.1 for the following experiments:

- Determination of RV negation given the parameters that specify the RV, kill vehicle, and intercept conditions.
- Determination of Technical Performance Measures (TPMs) as specified in the Detailed Analysis Plan:
 - **TPM#23.** Probability of Single Shot Kill
 - **TPM#24.** Probability of Hitting Target within Specified Aimpoint Accuracy. Note: This TPM cannot be calculated by PEELS alone, since PEELS can only predict the probability of kill given a hit point and miss distance.
 - **TPM#25.** Probability of the NMD System Meeting its Objective.
- Determination of aimpoint selection to support DRR. However, the user should be aware of the disproportionate lethal volumes for the three targets currently modeled. Specifically, the Long Range Nuclear Threat does not contain an expanded lethal volume. In addition, the lethal volumes are expected to change in the future when late-time structural effects are included.

²⁴ Joint Program Office, National Missile Defense, *The Parametric Endo/Exoatmospheric Lethality Simulation (PEELS) Accreditation Report for the National Missile Defense System (U)*, 14 April 2000, UNCLASSIFIED.

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Therefore, the optimum aimpoint suggested by PEELS 8.1 may change in subsequent versions.

The accreditation report has specified the following caveats under the recommendation for accreditation approval.

- PEELS 8.1 is not suitable for the calculation of endgame maneuvers undertaken by the EKV to achieve intercept.
- PEELS 8.1 lethal volumes contain no velocity dependence.
- PEELS 8.1 provides limited probabilistic outputs. Generally, the user feeds system 6-DOF data into PEELS 8.1 for engagement-by-engagement target negation calculations and then post-processes the data to provide a complete $P_{kill/hit}$ solution.
- PEELS 8.1 does not contain all C1 threats. PEELS 8.1 only contains those threats that have been officially released by the DIA (Attitude Control Reentry Vehicle, Medium Lethality Reentry Vehicle, and Long Range Nuclear Threat).
- Because of time constraints, hydrocode runs against the Long Range Nuclear Threat have not been performed. Therefore, the expanded lethal volume used in PEELS 8.1 for the Attitude Control Reentry Vehicle and Medium Test Reentry Vehicle are disproportionate to that used for the Long Range Nuclear Threat.
- The EKV model and target models are not user changeable. Any significant change to the EKV design will require review by DOE to determine any possible changes to the lethal volume data.
- PEELS 8.1 does not calculate post-impact damage to an RV that survives impact.

Lethality Assessment

The quarter-scale Light Gas Gun testing conducted to date utilized a low fidelity surrogate of the EKV that matched the average mass properties of both the Raytheon and Boeing EKV concepts but not their precise structure or materials. The results obtained could be representative of the grosser aspects of NMD's direct hit lethality against the Attitude Control Reentry Vehicle target. The tests showed that damage to NMD targets from direct hit by the EKV will depend on the location of the impact within the payload. *Not every hit would necessarily result in a kill.*

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The hydrocode analyses provided predictions of expected NMD lethality against threat targets in the hypervelocity regime and supported the development of the lethal volume in PEELS version 8.1 and enabled its use as a tool for DRR analysis.

After DRR, the development of the Live Fire Test and Evaluation (LFT&E) program will be addressed in the NMD Lethality IPT under the joint leadership of the JPO and the LSI. Although the LFT&E strategy is yet to be finalized, it is expected to include three flight tests, reduced-scale light gas gun tests, hydrocode analyses and PEELS analyses.

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V. ASSESSMENT OF DEPLOYMENT READINESS CRITERIA

The NMD Joint Program Office, with OSD approval,²⁵ defined seven readiness criteria to measure development progress and the technical capabilities of the system. These criteria, shown in Figure V-1, are grouped into three categories, namely: *Design Development* (i.e., potential to meet ORD performance requirements), *Deployment* (i.e., ability to deploy an operational NMD system by 4QFY05), and *Program Cost*. A joint LSI-Government DRR Team is assessing/evaluating the seven criteria and will present their findings at the NMD Deployment Readiness Review. The Operational Test Agency Team will make an independent assessment of the five NMD Critical Operational Issues (COIs), which are listed in the NMD C1 TEMP, and do not directly address the seven deployment readiness criteria.

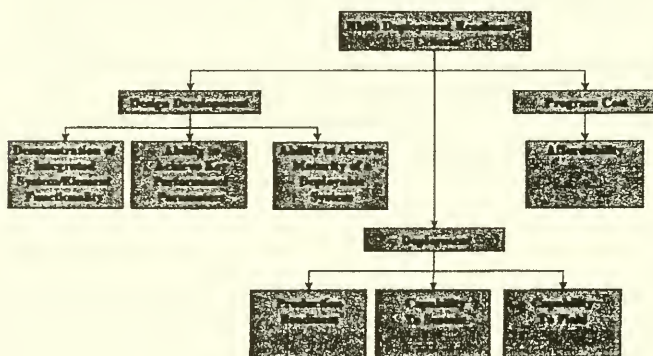


Figure V-1. Deployment Readiness Criteria

²⁵ The NMD deployment readiness criteria were approved by the Under Secretary of Defense (Acquisition & Technology) in June 1999.

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Definitions of the seven criteria are given below, repeated verbatim from the LSI document, *Deployment Readiness Review (DRR) Criteria and Metrics (D742-10063-1 Rev B)*, 22 October 1999. Our assessment focuses on the effectiveness demonstrated thus far and is based upon results from Integrated Flight Tests (IFTs), Integrated Ground Tests (IGTs), exercises, and discussions with JPO officials and members of the OTA Team. We address all seven criteria, but for the Deployment and Program Cost criteria, we simply point out issues that are relevant to their assessment. The standards by which our assessment of the criteria is made are the same that we would apply to any acquisition program that is being considered for deployment.

A. DESIGN DEVELOPMENT CRITERIA (CRITERIA 1 – 3)

The three design development criteria address whether the NMD system has the potential to meet threshold operational effectiveness requirements at the time of IOC planned for FY05. An assessment is based upon ground and flight test data but requires extensive use of modeling and simulation to examine performance throughout the engagement envelope. Given the immaturity of ground testing, the delays in ground-test capabilities, the limitations of flight testing, and the inadequacy of available simulations, *a rigorous assessment of potential system performance cannot be made*. That is, no one can reliably predict that the NMD system will perform at the stressing ORD levels.

1. Criterion #1: Demonstration of Integrated System/Element Functionality

Definition: *“Demonstration of system/element level functions through integrated ground and flight testing, including two intercepts (body-to-body contact), of which one intercept must be an integrated system test (IST). To protect the FY05 IOC, a single intercept allows award of construction contracts (but not the start of construction), long haul communications, and approval of necessary long lead hardware.”*

Assessment: This criterion has not been fully met since the NMD system has not achieved two intercepts nor demonstrated integrated system performance leading to a successful intercept. It did achieve an intercept in IFT-3, which allows for the award of construction contracts and long lead hardware to protect the FY05 IOC. A significant but incomplete degree of system functionality has been demonstrated over several tests.

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Discussion: The LSI has identified eleven top-level NMD system functions that are to be performed by the NMD system.²⁶ As shown in Table V-1, seven of the eleven functions have been demonstrated to some degree in a combination of past IFTs, IGTs, Risk Reduction Flights (RRFs), and Battle Planning Exercise (BPEX) 99-5. As discussed in Chapter IV, these functional demonstrations have significant caveats associated with them, chief among them the heavy reliance on range assets and surrogate elements in IFT-3 (and in the other intercept tests, albeit to lesser extent), and the immaturity of the element representations used in IGT-4 and IGT-5.

Table V-1. Achievement of NMD System Functions

System Function	Demonstration Test Events
1. System Operations Activation	IGT-4, 5. BPEX 99-5.
2. Maintain Readiness Operation	(To be addressed after DRR)
3. System Status	IGT-4, 5. BPEX 99-5.
4. Collateral Missions	(Independent of Test Program)
5. Control of Defense	IFT-4, 5. IGT-4, 5. RRF-5, 6, 7. BPEX 99-5.
6. Integrated Engagement Planning	IFT-4, 5. IGT-4, 5. RRF-5, 6, 7. BPEX 99-5.
7. Surveillance	IFT-3, 4, 5. RRF-5, 6, 7.
8. Sensor Operations	IFT-3, 4, 5. RRF-5, 6, 7.
9. Engage	IFT-3, 4. RRF-5, 6, 7.
10. Hit/Kill Assessment	(Not demonstrated – See also Criterion 2)
11. Launch Essential Maintenance	(To be addressed after DRR)

With the exception of Kill Assessment, testing has demonstrated the basics of the seven engagement-related functions listed in Table V-1.²⁷ Kill Assessment has only been demonstrated in the case of a clean miss²⁸ and will be phased in as new space-based

²⁶ *NMD Functional Architecture* (LSI Document Number D742-10081).

²⁷ The seven functions are: System Status; Control of Defense; Integrated Engagement Planning; Surveillance; Sensor Operation; Engage; and, Hit/Kill Assessment.

²⁸ Real-time kill assessment was not possible in IFT-3 because the GBR-P and BMC3 were not part of the "in-line" test.

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sensors (SBIRS High) become available. The functions related to maintenance and sustainability will not be quantitatively addressed until after the DRR when prototypical system elements become available. Collateral Missions, function 4, is not evaluated in the formal test program since it serves no role in the active NMD defense of the United States.

The eleven functions defined by the JPO do not specifically single out discrimination as one of the "system functions," although it clearly is involved in "engagement planning," "sensor operations," and the "engage" function. Given the technical challenge posed by discrimination, subsuming it at a lower level is inadvisable. Using its IR sensors and on-board processing, the EKV did distinguish the MRV from a large balloon and deployment bus in IFT-3. However, not only did the balloon and bus have IR signatures very different from the MRV, the EKV contractor was provided with detailed information about the target suite – required to execute the discrimination algorithm – before the flight test was performed.²⁹ The ability to function in a challenging – but still unsophisticated – countermeasure environment has not yet been demonstrated. Also, the simulations in ground tests have not convincingly demonstrated system functionality in a multiple target environment.

IFT-4 did show that the GBR-P could discriminate the MRV from tank-like objects, the large balloon, and debris. In addition, IFT-5 demonstrated that the GBR-P could discriminate the MRV from tank-like objects and debris. However, the target suites in the intercept flight tests did not include objects with radar signatures designed to mimic those of the MRV.

The Vandenberg-Kwajalein test geometry with the GBR-P radar essentially co-located with the interceptor limits the realism with which integration of the elements can be demonstrated. The Upgraded Early Warning Radar (UEWR) surrogate in California cannot replicate the role of an UEWR since it can acquire the target almost immediately after launch and is looking at a receding target at short range. The GBR-P on Kwajalein is limited by power and radar horizon from acquiring and discriminating the target early enough to be the source of Weapon Task Plan data. The test geometry forces the reliance on external, non-system assets such as GPS or the FPQ-14 range radar to provide data to support engagement planning.

²⁹ Balloons with IR signatures matched to the RV being flown will not be used until IFT- 10; there are no plans as yet to withhold detailed information about target signatures in an intercept test.

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2. Criterion #2: Ability of the System Design to Meet Key Performance Parameters

Definition: *“An assessment of the ability of NMD system design to meet system performance requirements as specified in the NMD Operational Requirements Document (ORD), including a plan to resolve shortfalls in the design, if required.”*

Assessment: The NMD system has demonstrated satisfactory progress in meeting two of the four required KPPs, namely, Human-in-Control and automated BMC3. Demonstration of the interoperability KPP has not yet begun. The system's ability to defend all fifty states from attacks at ORD-specified levels (KPP #1) has not been satisfactorily assessed, primarily because the simulations that were to demonstrate this with confidence and high fidelity have not matured as planned. Assessing KPP #4 (Interoperability) is not part of the LSI evaluation plan for the DRR. However, the OTA Team and DOT&E will evaluate KPP #4 as part of the continuing evaluation of NMD.

Discussion: A Key Performance Parameter (KPP) is that capability or characteristic so significant that failure to meet the threshold value can lead to the reassessment or termination of the program. The latest (June 2000) NMD ORD identifies four KPPs:

- KPP #1 – Defense of the United States. The ability of the system design to meet threshold operational effectiveness requirements – negation and performance probabilities – given a specific attack size and sophistication of associated countermeasures.
- KPP #2 – Human-in-Control (HIC). The capability of the system for positive control of the NMD system by human operators for system functions such as battle redirection, weapon release, and engagement termination.
- KPP #3 – Automated BMC3. The ability of the system to provide automated battle management capability.
- KPP #4 – Interoperability. The ability of the system to be interoperable and compatible with external systems such as ITW/AA and NORAD. The operational benefit of interoperability will be enhanced flexibility enabling the addition of new users or new missions and optimized information flow.

Criterion 2 focuses on the ability of the system design to meet ORD specified requirements in key areas. However, as indicated above, the immaturity of ground testing and the inadequacy of available simulations preclude evaluators from making a rigorous assessment of potential system performance. One example is the current limited ability to conduct nuclear survivability testing of the EKV to the required flux levels. Additionally, IGTs did not incorporate nuclear environment effects in the design-to

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scenarios. Neither the DRR Team nor the OTA Team can reliably predict that the NMD system will perform at the ORD levels.

LIDS, the principal M&S tool to have been used by the OTA Team to evaluate NMD system performance, was not available in time to support the DRR. Furthermore, the LIDS version that was delivered has the following limitations that may preclude it from being accredited in the future as a valid evaluation tool.

- LIDS emulates BMC3 operations in an unrealistic, low-fidelity manner.
- Radar models within LIDS are represented as “cookie cutters.” The representations are relatively simplistic and are specification-based rather than physics-based.
- LIDS does not have much flexibility with regards to operator control of engagement conditions.

The Integrated System Test Capability (ISTC) hardware and software used in the IGTs to date are immature and do not provide an adequate representation of the NMD C1 architecture. None of the major NMD elements (BMC3, XBR, UEWR, Weapon System, and DSP/SBIRS) are mature enough to provide an adequate performance evaluation of the NMD C1 system. IGT-4 and IGT-5 did demonstrate the integration of the BMC3 with the UEWR and XBR, but these tests provide only limited data to support an evaluation of the proposed NMD C1 system at the DRR. Major shortcomings in IGT-4 and IGT-5 that hamper the evaluation of the system to meet its Key Performance Parameters include the following limitations:

- Weapon System
 - No position or velocity errors in GB/EKV flyout
 - IFTU/TOM not used by EKV
 - IFICS communications event windows are ignored
 - No raid sizes greater than one using the high fidelity representations of the EKV (RTSim)
 - Larger raid sizes not assessable because weapon system test drivers lack high enough fidelity
 - Limited number of interceptors available
 - No valid representation of command and launch equipment
 - No RTSim V&V information available to OTAs or DOT&E; fidelity of RTSim model is unknown

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- EKV acquisitions of targets are unrealistically optimistic due to low noise assumptions
- DSP/SBIRS Simulation
 - Timing and transmission of threat launch alert messages are scripted and not indicative of actual DSP or SBIRS performance
 - DSP/SBIRS booster burn out messages are near perfect, so radar detections based on these cues are unrealistic
- Radars Simulation
 - UEWR Simulation does not support discrimination or classification, and therefore cannot identify threat RVs

While ground testing isn't adequate for reliably predicting system performance at IOC, it has raised significant issues that call into question the ability of the NMD system to negate threats at the ORD levels. Each KPP entails issues that are not fully resolved by the time of the DRR:

- KPP #1 – Defense of the United States.
 - SBIRS High for NMD utilization (at least three satellites) is not expected to be available until 2006. Therefore, cueing of NMD radars will continue to rely on DSP. SBIRS High unavailability will also degrade kill assessment capabilities.
 - Even if SBIRS High is available and meets its own ORD requirements for target position and velocity, the OTA Team has indicated that SBIRS High might not be accurate enough to enable the XBR to acquire the target complex. This is particularly problematic when the “blind time” between booster burnout and XBR acquisition of the missile complex is long.³⁰
 - UEWR participation in RV detection, tracking, and classification is absolutely essential in dealing with ICBM threats to the East Coast of CONUS. The OTA Team has raised system architecture issues on the limitations of UEWR coverage to deal with some of these threats. Also, it is not clear that the UEWRs will have the detection and classification performance necessary to negate all the C1 threats to the 50 United States.
 - The uncertainty in predicted impact points near but within the boundary of the protected area, as determined by the battle-management software, may result in the failure to engage the threat. Similarly, predicted impact points near but outside the boundary of the protected area may result in the unnecessary launch of interceptors.

³⁰ The uncertainty in target position grows linearly with time.

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- The JPO has determined that the CAIV estimate for meeting the reliability requirements for long-haul communications is currently unaffordable. The User community has, therefore, deferred full satisfaction of these requirements at this time. Thus, the ability of the NMD system to meet reliability requirements will not be met at IOC but will be eventually phased in.
- KPP #2 – Human-in-Control (HIC). The HIC requirements will likely be achieved by the time of IOC.
 - To date, C2Sim's and BPEx's have demonstrated all three HIC actions, namely, "Granting Defense Engagement Authorization (DEA)," "Management by Exception," and "DEA Withdraw."
 - However, BPEx's have shown that situation awareness is degraded because of the phenomenon of "phantom tracks." Phantom tracks arise when radar coverage of a tracked RV transitions from one radar to a second (known as "handover"), and the BMC3 mistakenly interprets the new radar returns as originating from a second RV. BPEx 99-5 runs have demonstrated that this phenomenon occurs with sufficient frequency that operator control of the NMD system is adversely impacted.
- KPP #3 – Automated BMC3. The automated BMC3 requirements will likely be achieved by the time of IOC.
 - To date, C2Sim's and BPEx's have demonstrated the ability of the BMC3 to provide automated decision support. An unresolved issue pertaining to automated BMC3 is the timeliness of integrated engagement planning, and in particular, the inability of the battle manager to meet required time constraints for certain scenarios.
 - An issue of resource management was uncovered during BPEx 99-5. Operators were unable to prevent interceptors from being launched at phantom RVs by employing Management by Exception. Rather, they were forced to put interceptors in reserve mode.
- KPP #4 – Interoperability. The approved ORD of January 1997 had only KPPs 1 – 3. The addition of the interoperability KPP was raised in 1999 but was not formally added until the new June 2000 ORD was approved. Assessing interoperability was not part of the LSI evaluation plan for the DRR. The NMD system is not yet mature enough to fully assess interoperability.
 - The NMD Communications architecture is not yet finalized. The OTA Team warns that, as a result, the system might not be ready to support IOT&E.

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The BMC3 to Commander-In-Chief (CINC) interface inside Cheyenne Mountain will not be tested prior to the DRR, and the User has not yet approved a plan for this integration.

3. Criterion #3: Maturity of the Deployable System Design

Definition: *"An assessment of the readiness of the system design to be manufactured, deployed, supported, and potentially evolved to counter more sophisticated threats."*

Assessment: Design reviews have not identified any significant issues pertaining to the maturity of the design of the NMD system or elements. However, the ability to perform a credible assessment of NMD design maturity is confounded by the current immature state of ground test facilities and models and simulations. Furthermore, the JPO has not yet developed a formal, credible plan for evolving the design from C1 to C2/C3. In particular, the ability to discriminate more sophisticated countermeasures needs special consideration. Discrimination is a high-risk area that if left unresolved could prevent NMD from meeting its requirements.

Discussion: The EKV and XBR are being designed to counter the C2 threat, and the BMC3 has an internal architecture suitable for evolution. However, these are all theoretical assessments. We are unaware of any testing that verifies these assessments and, thus, have serious concerns with the evolution of the C1 architecture to C2 and C3 architectures.

- Discrimination is perhaps the most challenging aspect of national missile defense. As discussed extensively in open literature, the enemy could employ various types of countermeasures to overwhelm this function. Furthermore, onboard discrimination relies heavily on *a priori* threat information derived from intelligence sources. In short, there has not been any demonstration that the discrimination algorithms are sufficiently robust for handling unexpected sophisticated countermeasures in realistic scenarios.
- SBIRS Low is an integral component of the NMD C3 (objective) system, necessary for performing midcourse tracking and discrimination in many operational engagements. A preliminary System Requirements Review recently held in July 2000 indicated that SBIRS Low might not adequately augment NMD system discrimination capability.

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A 1992 Defense Science Board (DSB) report³¹ on ballistic missile defense underscores our concerns on discrimination. Not only does the report speak of the unpredictability of the actions of "Third World Aggressors" with regards to their employment of penetration aids. The DSB panel makes the following recommendation: "The US response to the problem of PENAIDS should be a highly focused intelligence effort and a substantial testing program in which flexible and robust radar and interceptor techniques can be developed and proven against a wide variety of simple PENAIDS and tactics." The findings and recommendations of this report remain valid today.

B. DEPLOYMENT CRITERIA (CRITERIA 4 – 6)

The three criteria under deployment – production readiness, capability to sustain, and capability to field – were selected to demonstrate that all necessary planning functions have been completed with enough detail at the time of DRR to allow for the production and deployment of an operationally suitable and sustainable system by 2005.

1. Criterion #4: NMD Production Readiness

Definition: *"An assessment of the program's readiness to produce the system."*

Assessment: While there is no direct data to support findings in this area, it is apparent from difficulties in maintaining flight test schedules that the extreme quality control that must be maintained in assembly and preparation of the EKV will complicate the weapon system production process.

Discussion: This criterion is an assessment of the NMD program's readiness to produce the components of the NMD system – with the quality and reliability necessary to meet the NMD program requirements – on time to support a FY05 deployment in accordance with the phased production program and required DAB milestones. A production readiness assessment will be based on system and element manufacturing and producibility plans.

2. Criterion #5: Capability to Field the NMD System

Definition: *"An assessment of the program's readiness to field the system."*

³¹ Report of the Defense Science Board Task Force on Ballistic Missile Defense (U), 1991 Summer Study, SECRET.

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Assessment: As stated in the Criterion #4 assessment above, the quality control requirements in assembling the EKV will probably drive the weapon system production timelines. Past experience in preparation for integrated flight testing suggests that this may have a major impact in satisfying the FY 05 and 07 delivery requirements. The LSI states that it is "aware of no evidence" that quality control is an issue.

Discussion: This criterion is an assessment of the NMD program's readiness to field the system. In order to support site selection and a construction award, deployment functions such as facility/site design and environmental impact statements must be complete. The DRR Team has indicated that tactical and tactical support facility designs³² will not be at the required 100 percent completion by the DRR date. Long-lead times required for construction and environmental work make progress in this area especially critical in order to meet the deployment schedule.

3. Criterion #6: Capability to Sustain the NMD System

Definition: *"An assessment of the program's readiness to sustain the system once fielded."*

Assessment: Insufficient data available to make an assessment. The OTA assessment is expected to address survivability aspects of the program in their Early Operational Assessment (EOA) report.

Discussion: This criterion is an assessment of the NMD program's readiness to sustain the system once fielded. An evaluation will be made based on progress toward the development or completion of the following items:

- JPO-generated documents
 - Joint Manpower Estimate (JME)
- LSI-generated documents:
 - Integrated Logistics Support Plan (ILSP)
 - System Training Plan (STP)
 - Operational Suitability Assessment Report
- OTA assessment

³² Tactical facilities are those needed to meet the operating requirements of the NMD system, including the XBR antenna mount facility, radar control and support systems facility, launch farm complex, missile field, readiness station, interceptor receiving and processing facility, interceptor storage facilities, and maintenance and vehicle heated storage facility.

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Early Operational Assessment

C. PROGRAM COST CRITERION (CRITERION 7)

Definition: "An estimate of the total system acquisition, sustainment, and disposal cost."

Assessment: The total cost of the Capability 1 NMD system was assessed by the United States General Accounting Office at \$36.2B.³³ There are still several cost uncertainties in the T&E arena that the Department needs to address that could drive the cost higher. Removal of the limitations to operational realism will have to be factored into the overall program cost.

Discussion: A cost assessment includes a comprehensive review and comparison of program information from a variety of sources. The following items must be evaluated:

- Funding assessment.
- A Program Life-Cycle Cost Estimate (PLCCE) of the NMD C1 program reconciled with the BMDO NMD cost assessment.
- A review of CAIV Trades and Cost Targets assessments.

An Independent Cost Estimate (ICE) of NMD Program Life-Cycle Cost performed by the Cost Analysis Improvement Group (CAIG).

³³ Refer to GAO Report GAO/NSIAD-00-131, *Status of the National Missile Defense Program*, May 2000.

VI. RECOMMENDATIONS

A. FLIGHT TESTING

1. Testing Complexity

Testing is currently designed to accommodate an aggressive pace of development. Flight testing, however, needs to aggressively increase in complexity to keep pace with NMD C1 development and to adequately stress design limits, particularly for the missile system.

- Target suites used in integrated flight tests need to incorporate challenging unsophisticated countermeasures that have the potential to be used against the NMD C1 system (e.g., tumbling RVs and non-spherical balloons). Use of the large balloon should be discontinued, as it does not mimic in any way the current test RV. True decoys that attempt to replicate RV signatures as well as balloon-type countermeasures that have been examined by the Countermeasures Hands-On Program (CHOP) need to be integrated into flight test target suites.
- Engagement times of day and solar position need to be planned to stress the acquisition and discrimination process by all of the sensor bands. Additionally, the effects of weather on radar, telemetry and satellite operations need to be tested either during intercept or risk reduction flight tests or other targets of opportunity. Radar discrimination, IFICS transmission/reception, and DSP/SBIRS launch detection may be operating at their technical limits, and heavy rain or dense cloud conditions may have significant effects on their performance.
- Category B engagements are engagements in which an interceptor is launched against a target cluster (based on radar track) before the threat RV is resolved and discriminated. Since such engagements are expected to be common during NMD missions, this capability will need to be demonstrated in an integrated flight test before IOC. Such engagements are currently not included in the defined test plan.
- Multiple engagements will be the expected norm in tactical situations, therefore, simulated extrapolation from 1-on-1 scenarios to M-on-N need to

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be validated through intercept flight testing. Multiple engagements of at least 2-on-2 scenarios need to be flight tested, as too many technical challenges to the system exist beyond merely the command and control software. Identifying the impact of the interaction of one kill vehicle to another and assessing the performance of ground tracking systems in M-on-N scenarios lead to several questions:

- How will an EKV respond to another EKV in its field of view, or multiple RVs in its field of view?
- How is the performance of an EKV seeker affected by a thrusting EKV or another EKV intercepting an object in its field of view?
- Can the X-Band radar simultaneously track multiple RVs that require different antenna orientations?
- Can the IFICS communicate with multiple KVs?
- Radar discrimination with limited *a priori* knowledge of the target complex needs to be flight tested prior to the FY01 radar decision. This type of test ("pop quiz" type) of flight test needs to be executed, at least during a risk reduction flight. This test should employ multiple decoys designed to mimic the RV radar signature but should not provide unrealistically detailed target or decoy information to the GBR-P radar prior to the engagement.

2. Testing Artificiality

Current test range limitations need to be removed to adequately test the NMD system.

- Use of the FPQ-14 range radar as the source of Weapon Task Plan data needs to be phased out. Target trajectories or radar surrogate locations need to be changed to permit the organic NMD system to provide early radar cueing with the appropriate degree of position and velocity accuracy.
- Engagement geometries need to be devised that will provide higher speed engagement conditions for the EKV, as would be expected in the C1 timeframe with the tactical booster.

3. Operational Realism

Avoidable limitations to operational realism must be removed before conduct of IOT&E.

- Rehearsed engagements with *a priori* knowledge of target complex, target trajectory, and time of launch need to be discontinued during operational testing. Situations employing lack of *a priori* knowledge also need to be

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examined in DT to assure acquisition and discrimination algorithms are properly designed.

- The flight testing artificialities addressed above must be eliminated for IOT&E. Alternative intercept test scenarios must be devised that employ inbound or crossing targets rather than outbound relative to the Early Warning Radar. GPS and midcourse radar tracking using a transponder cannot be used by the NMD system to perform its mission. The Weapon Task Plan must be prepared based on organic NMD tracking systems. Option for higher speed intercepts must be investigated.
- Deployed element usage needs to be maximized for IOT&E. The X-Band Radar and/or Upgraded Early Warning Radar should be used. Deployed IFICS ground antennas and tactical communications should also be tested as part of the IOT&E.
- Multiple engagements must be accomplished during IOT&E. Furthermore, this type of engagement should be flown in IFTs before IOT&E to maximize the chance of success in IOT&E.

4. Spares

Plans for providing adequate spares should be developed, especially for targets where current target components can be as much as 30 years old.

- Adequate GBI booster spares need to be procured as a risk reduction effort, to preclude further schedule slip should a failure occur in preflight booster testing.
- NMD is currently employing what is referred to as a "rolling spare" concept for its targets. It can take up to six weeks to prepare for and reset the IFT launch date. A "hot spare" approach for which an additional target is prepared at the target launch site would eliminate the need to stand down operations at the interceptor launch site in the event of a failed target launch. This could be more significant as flight testing becomes more complex or critical, such as in the small number of OT shots, when a failed target launch might be much more costly to the program. The delay to the target launch during IFT-5 is a strong example of this potential problem. If the last minute target problems could not have been corrected, IFT-5 would have slipped an additional month.

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B. GROUND TESTING AND SIMULATION**1. Hardware-in-the-Loop (HWIL)**

An innovative new approach needs to be taken towards HWIL testing of the EKV, so that potential design problems or discrimination challenges can be wrung out on the ground in lieu of expensive flight tests.

- HWIL development needs to focus on the EKV, since this is the most challenging technical area for NMD hit-to-kill. Funding and development needs to be accelerated or the required capability in this area will not be available to support C1 testing.
- The HWIL facility and test approach needs to be done at the highest level of EKV system integration achievable, so that all component interaction, from sensors to the divert systems, can be examined simultaneously.
- An innovative approach should be taken that provides an interactive scene generation capability that adapts to changes in EKV and target aspect angles.
- Scene generation should have the capability to challenge target acquisition by the EKV, discrimination and homing algorithms with anticipated or potential countermeasures.

2. Lethality

Current analysis of exoatmospheric lethality is limited to computer simulations and light gas gun tests.

- New techniques or facilities need to be developed to achieve higher speed intercepts on the ground in full scale to validate hydrocode simulations and ¼ scale light gas gun tests.
- Investments need to be made in the Holloman High Speed Test Track to permit lethality testing of medium to high fidelity representations of the kill vehicle to at least the low end of the range of potential intercept velocities.

3. Simulation

LIDS development has taken much longer than originally promised. Additionally, it is practically a hard-wired simulation that only the Boeing developers can modify. This precludes independent, Government sensitivity analysis and assessment.

- LIDS needs to evolve to a fully validated high fidelity simulation. It should be flexible enough to allow both DOT&E and Service Operational Test Agencies to examine subsystem drop-outs and graceful degradation or other

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areas of sensitivity or design margin analysis. There is currently no apparent plan by the LSI to do this.

C. PROGRAMMATIC ISSUES**1. Performance Criteria**

Discrimination by the radar and weapon system (EKV) should be given more weight in performance criteria. All other aspects of the NMD performance requirements appear to be within the state of the art of technology. Discrimination by the EKV on the other hand will be the biggest challenge to achieving a hit-to-kill intercept. Decoys that provide a close representation of the RV or modify the RV signature have only been minimally investigated.

2. ORD Reliability Requirements

The NMD requirements for reliability, availability, and effectiveness are specified in the NMD ORD. When these requirements are allocated to the individual elements of the NMD system, the resulting reliability performance standards are unrealistically high as well as difficult to test. As the program develops, it may be necessary to re-examine the overall requirements for NMD reliability and availability.

3. Risk Reduction Efforts

The following programs can make significant contributions to risk reduction efforts if properly utilized.

- Minuteman Missile OPEVAL testing needs to continue to be leveraged, not only for IFT rehearsal, but also to look at the impact of countermeasures to ground radar systems.
- Ballistic Missile Critical Measurements Program tests need to be conducted to examine countermeasure signatures and discrimination algorithms.

4. Countermeasures Hands-On Program (CHOP)

BMDO sponsors a red team approach to the possible development of countermeasures. Operated at very modest funding levels, CHOP develops and demonstrates ROW countermeasures that could be challenging for U.S. missile defense systems. By charter, CHOP does not try to develop "sophisticated" countermeasures. However, the unsophisticated, ROW countermeasures they do develop are realistic and

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challenging and should be included as an integral part of the NMD flight testing and ground test HWIL simulation programs.

- The CHOP program needs to be supported for aggressively examining the potential of states of concern to develop more sophisticated countermeasures.
- The Defense Intelligence Agency (DIA) needs to begin tracking CHOP experiments. They should then investigate and bound the ability of states of concern to develop and apply the technologies that the CHOP teams use in their experiments to counter an NMD system. This information should then be fed back to CHOP management for planning and executing CHOP developments.

5. Operations in a Nuclear Environment (OPINE)

The NMD Program Office chartered a red team to look at OPINE testing and facility requirements for the EKV. The red team found the Raytheon-proposed test and parts screening program to be inadequate.

- OPINE testing needs to be conducted at the EKV system level in nuclear environments that replicate expected operational conditions, including expected flux levels.
- OPINE test facilities at Aberdeen Proving Ground and Arnold Engineering Development Center need to receive appropriate and timely funding to support EKV OPINE testing required to begin in FY02.

6. Hit to Kill

The NMD Program Office should investigate lethality enhancement options for dealing with potential countermeasures, using relatively simple techniques, that try to alter the effective RV size or shape in an attempt to foil discrimination and aimpoint selection.

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APPENDIX A – CROSSWALK

The U.S. Army Test and Evaluation Command (ATEC), the U.S. Air Force Operational Test and Evaluation Center (AFOTEC), and the Joint Interoperability Test Command (JITC), acting as an Operational Test Agency (OTA) team, are addressing NMD system operational effectiveness and suitability for the DRR. The OTA team results will be recorded in the Early Operational Assessment (EOA) report and presented in briefing format at the DRR. Rather than evaluating the seven DRR criteria, as is being done by the LSI-JPO DRR team, the OTA Team is focusing on the Critical Operational Issues (COIs)³⁴, listed below, to address system effectiveness and suitability.

- COI-1 (Negate Threat): Does the NMD System have the ability to detect, discriminate, engage, intercept, and negate the threat to defend the 50 United States?
- COI-2 (Battle Management/Decision Support): Does the NMD System generate and provide the required Human-in-Control and automated battle management decision support to ensure the system responds in a way consistent with operational requirements?
- COI-3 (Interoperability/Graceful Degradation): Does the NMD System allow for interoperability and integration with existing and planned systems, in accordance with joint standards, to provide for effective mission performance, to include graceful system degradation?
- COI-4 (System Supportability): Does the NMD System supportability and operational availability provide for continuous operations through each phase of the system's lifecycle?
- COI-5 (Survivability/Security): Is the NMD System survivable and secure in expected operational environments?

Table A-1 depicts the relationship between COIs, Key Performance Parameters (KPPs), and the DRR criteria.³⁵ As indicated in Table A-1, the COIs do not readily map into the DRR criteria. Indeed, the DRR criteria were generated to answer whether an

³⁴ The COIs, which are derived from the NMD ORD and developed by USSPACECOM, are documented in Part IV of the NMD TEMP.

³⁵ Refer to Chapter III, "Deployment Readiness Review," for complete definitions of the KPPs and deployment criteria.

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effective NMD system could be deployed by FY05, whereas the COIs address effectiveness and suitability issues, *given a deployed system*, during Operational Test and Evaluation (OT&E). The five COIs overlap primarily with the Design Development Criteria (Criteria 1 – 3) as well as Criterion 6 (Capability to Sustain the NMD System).

Table A-1. COI, KPP, DRR Criteria Crosswalk

Critical Operational Issue	Key Performance Parameter	DRR Criteria
COI-1 (Negate Threat). Does the NMD System have the ability to detect, discriminate, engage, intercept, and negate the threat to defend the 50 United States?	KPP 1 (Defense of the US).	Criterion 1 (Demonstration of System/Element Functionality). Criterion 2 (Meeting KPPs). Criterion 3 (Maturity of System Design).
COI-2 (Battle Management/ Decision Support). Does the NMD System generate and provide the required Human-in-Control and automated battle management decision support to ensure the system responds in a way consistent with operational requirements?	KPP 2 (Human-in-Control). KPP 3 (Automated BMC3).	Criterion 1 (Demonstration of System/Element Functionality). Criterion 2 (Meeting KPPs).
COI-3 (Interoperability/ Graceful Degradation). Does the NMD System allow for interoperability and integration with existing and planned systems, in accordance with joint standards, to provide for effective mission performance, to include graceful system degradation?	KPP 4 (Interoperability).	Criterion 1 (Demonstration of System/Element Functionality). Criterion 2 (Meeting KPPs). Criterion 3 (Maturity of System Design).
COI-4 (System Supportability). Does the NMD System supportability and operational availability provide for continuous operations through each phase of the system's lifecycle?	KPP 4 (Interoperability).	Criterion 2 (Meeting KPPs). Criterion 6 (Capability to Sustain the System).
COI-5 (Survivability/Security). Is the NMD System survivable and secure in expected operational environments?	KPP 1 (Defense of the US). KPP 4 (Interoperability).	Criterion 2 (Meeting KPPs). Criterion 6 (Capability to Sustain the System).

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APPENDIX B – DATA SOURCES

The following test execution reports, documents, briefings, etc. were referenced in the writing of the DOT&E DRR Report.

INTEGRATED FLIGHT TESTS

IFT-1A

- *Sensor Flight Test Final (60 Day) Report, Addendum 1 – Classified Data and Results*, 24 June 1997, BOEING COMPETITION SENSITIVE (SECRET)
- *National Missile Defense (NMD) Integrated Flight Test 1A (IFT-1A) Test Execution Report*, 31 August 1997, BOEING COMPETITION SENSITIVE
- *Integrated Flight Test 1A Post-Test Analysis Report (PTAR) for the National Missile Defense System*, 10 September 1997 (SECRET)
- *IFT-1A Final Integrated Truth Data Package*, 15 September 1997 (SECRET)

IFT-2

- *IFT-2 Sensor Flight Test Final Report*, 6 April 1998, RAYTHEON COMPETITION SENSITIVE (SECRET)
- *National Missile Defense Integrated Flight Test 2 Test Execution Report*, 27 March 1998, RAYTHEON COMPETITION SENSITIVE
- *National Missile Defense (NMD) Final Post Test Analysis Report Integrated Flight Test (IFT) 2*, 28 May 1998 (SECRET)
- *IFT-2 Final Integrated Truth Data Package*, 16 March 1998, (SECRET)
- *IFT-2 Post Mission Data Review Presentation Package*, 26 March 1998

IFT-3

- *IFT-3 Quick Look Data Review Briefing*, 7 October 1999
- *IFT-3 Post Test Analysis Briefing*, 18-19 November 1999
- *IFT-3 60-Day Integrated Data Package Report*, 3 December 1999 (SECRET)
- *IFT-3 Test Evaluation Report*, 21 January 2000, RAYTHEON COMPETITION SENSITIVE (SECRET)

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- NMD OTA IFT-3 Level III Authenticated Database, 1 March 2000, 1 CD-ROM (SECRET)

IFT-4

- Integrated Flight Test 4 Initial Results Briefing, 28 January 2000
- IFT-4 Post Test Analysis Briefing, 22 March 2000
- NMD OTA IFT-4 Level III Authenticated Database, 4 April 2000, 1 CD-ROM (SECRET)

IFT-5

- *NMD Integrated System Test 5 48-Hour Report*, 10 July 2000

INTEGRATED GROUND TESTS**IGT-3**

- *Integrated Ground Test Three (IGT-3) Quick Look Report (QLR)*, 22 February 1999

IGT-4

- *Integrated Ground Test Four (IGT-4) Quick Look Report (QLR)*, 20 August 1999
- *IGT-4 Test Evaluation Report*, 3 November 1999 (SECRET)
- NMD OTA IGT-4 Level III Authenticated Database, 13 December 1999, 5 CD-ROMs (SECRET)
- NMD OTA IGT-4 Frame-grabber Data, 28 December 1999 (SECRET)

IGT-5

- *IGT-5 Test Evaluation Report*, 23 December 1999 (SECRET)
- NMD OTA IGT-5 Frame-grabber Data, 28 December 1999 (SECRET)
- NMD OTA IGT-5 Level III Authenticated Database, 8 March 2000, 7 CD-ROMs (SECRET)

RISK REDUCTION FLIGHTS

- *National Missile Defense Lead System Integrator Risk Reduction Flight 5 Post Test Report*, 19 April 1999

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- *National Missile Defense Lead System Integrator Risk Reduction Flight 7 48 Hour Assessment Report*, 15 November 1999
- *NMD OTA RRF-6 Level III Authenticated Databases*, 28 March 2000, 1 CD-ROM (SECRET)

BATTLE PLANNING EXERCISES

- *National Missile Defense (NMD) Battle Planning Exercise (BPEx) 99-1 Final Report*, 24 March 1999
- *National Missile Defense (NMD) Battle Planning Exercise (BPEx) 99-2 Final Report*, 4 August 1999
- *National Missile Defense (NMD) Battle Planning Exercise (BPEx) 99-3 Final Report*, 25 August 1999
- *National Missile Defense Early Operational Assessment Battle Planning Exercise 99-5 After Action Report*, 7 December 1999

EXTERNAL ASSESSMENTS

- *NMD OTA Team Interim Early Operational Assessment I Briefing*, 15 February 2000

DATA SOURCES – PENDING**Integrated Flight Tests**

- IFT-4 Test Evaluation Report
- IFT-4 Integrated Data Package Report
- IFT-5 Test Evaluation Report
- IFT-5 Integrated Data Package Report
- *NMD OTA IFT-5 Level III Authenticated Database*

Risk Reduction Flights

- *RRF-6 Post Test Report*
- *RRF-7 Post Test Report*

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APPENDIX C – ACRONMYS

ABM	Anti-Ballistic Missile
AFOTEC	Air Force Operational Test and Evaluation Center
ATEC	Army Test and Evaluation Command
AWG	Accreditation Working Group
BI-1	Build Increment 1
BMC2	Battle Management, Command, and Control
BMC3	Battle Management Command, Control, and Communications
BMD	Ballistic Missile Defense
BMDO	Ballistic Missile Defense Organization
BPEX	Battle Planning Exercise
CI	Capability 1
C2Sim	Command and Control Simulation
CAIG	Cost Analysis Improvement Group
CAIV	Cost as an Independent Variable
CHOP	Countermeasures Hands-On Program
CI-3A	Capability Increment 3A
CINC	Commander-In-Chief
COE	Common Operating Environment
COI	Critical Operational Issue
CONUS	Contiguous United States
COTS	Commercial Off The Shelf
DAB	Defense Acquisition Board
DEA	Defense Engagement Authorization
DIA	Defense Intelligence Agency
DII	Defense Information Infrastructure
DoD	Department of Defense
DOT&E	Director, Operational Test and Evaluation
DRR	Deployment Readiness Review

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DSB	Defense Science Board
DSP	Defense Support Program
EKV	Exoatmospheric Kill Vehicle
EOA	Early Operational Assessment
FY	Fiscal Year
GBI	Ground Based Interceptor
GBR-P	Ground Based Radar-Prototype
GN&C	Guidance, Navigation, and Control
GPS	Global Positioning System
HIC	Human-in-Control
HTK	Hit to Kill
HW	Hardware
HWIL	Hardware in the Loop
ICBM	Inter-Continental Ballistic Missile
ICE	Independent Cost Estimate
IFICS	In-Flight Interceptor Communications System
IFT	Integrated Flight Test
IFTU	In Flight Target Update
IGT	Integrated Ground Test
ILSP	Integrated Logistics Support Plan
IMU	Inertial Measurement Unit
IOC	Initial Operational Capability
IOT&E	Initial Operational Test and Evaluation
IR	Infrared
IST	Integrated System Test
ISTC	Integrated System Test Capability
ITW/AA	Integrated Tactical Warning / Attack Assessment
JITC	Joint Interoperability Test Command
JME	Joint Manpower Estimate
JNTF	Joint National Test Facility
JPO	Joint Program Office
JTA	Joint Technical Architecture
KLC	Kodiak Launch Complex

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KMR	Kwajalein Missile Range
KPP	Key Performance Parameter
LFT&E	Live Fire Test and Evaluation
LGG	Light Gas Gun
LIDS	LSI Integration Distributed Simulation
LSI	Lead System Integrator
MDAP	Major Defense Acquisition Program
MBE	Management-by-Exception
MRV	Medium Reentry Vehicle
MSE	Multiple Simultaneous Engagement
NCA	National Command Authority
NMD	National Missile Defense
OPINE	Operations in a Nuclear Environment
ORD	Operational Requirements Document
OSD	Office of the Secretary of Defense
OTA	Operational Test Agency
OT&E	Operational Test and Evaluation
PEELS	Parametric Endo-Exoatmospheric Lethality Simulation
PLCCE	Program Life-Cycle Cost Estimate
PLV	Payload Launch Vehicle
ROW	Rest-of-World
RRF	Risk Reduction Flight
RTC	Report to Congress
RTSim	Real-Time Simulation
RV	Reentry Vehicle
SBIRS	Space Based Infrared System
STP	System Training Plan
SW	Software
TD 2	Taepo Dong 2
TEMP	Test and Evaluation Master Plan
TPM	Technical Performance Measure
UEWR	Upgraded Early Warning Radar
UHF	Ultra-High Frequency

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USSPACECOM	US Space Command
VAFB	Vandenberg Air Force Base
WTP	Weapon Task Plan
XBR	X-Band Radar

10 July 2001

Pentagon report reveals flaws in missile defense**by Rep. John F. Tierney
Boston Globe**[http://www.boston.com/dailyglobe2/191/...](http://www.boston.com/dailyglobe2/191/)

NOT TOO LONG ago, the Pentagon's purchase of \$400 hammers and \$640 toilets raised eyebrows in Congress and among the public. Yet few people claimed those deluxe hammers couldn't cleanly hit their targets - most likely overpriced nails. And the toilets were said to flush with exquisite efficiency.

Not so the Pentagon's latest folly - an obscenely expensive but flawed missile defense system the Bush administration appears determined to deploy as early as 2004, even though the individual who was charged with evaluating its readiness has declared that it will not be ready, even in a limited form, until 2011.

Philip Coyle, formerly the Pentagon's chief civilian test evaluator, testified last September at a hearing before the national security subcommittee of the House Committee on Government Reform, of which I am a member. Coyle outlined the findings of a report he prepared during the National Missile Defense Deployment Readiness Review a month earlier. I asked him to provide his report, which is unclassified, to the subcommittee. Neither he nor Lieutenant General Ronald Kadish, director of the missile defense program, expressed reservations about making the report public.

The subcommittee voted unanimously to make the report part of the hearing record.

Finally pried free two weeks ago - after eight months, six official requests, threats of subpoenas, a letter to Defense Secretary Donald Rumsfeld from 55 House Democrats, and over the continuing objections of Pentagon officials - the report confirms the glaring deficiencies in the testing program that Coyle raised last September.

The report describes a phenomenon in simulation exercises called "phantom tracks" in which interceptors were accidentally launched against missiles that did not exist. Although operators attempted to take emergency actions to override these launches, they failed every time. The system "simply was not behaving according to operator actions."

Coyle concluded that the system's effectiveness is not yet proven, even in the most elementary sense. In fact, according to his report, the program is so immature that "a rigorous assessment of potential system performance cannot be made."

Yet the Pentagon has no plans to test basic elements of the system, not even to conduct flight tests with more than a single missile, even though the Pentagon

concedes that multiple engagements are the most likely scenario. The testing program also ignores widely available decoys that adversaries would find simple to implement."

The report describes how flight tests are being dumbed down to ensure the public perception of success. The Pentagon, for example, is reducing the number of decoys, operators are relying on artificially "canned" scenarios, and interceptors are being given advance information they won't have in real engagements. Even with these "adjustments," the program has experienced embarrassing failures.

Significantly, the report finds that the system can't defend against accidental or unauthorized launches from major nuclear powers, as originally envisioned. The Pentagon has been backtracking on this issue and no longer considers it a key goal.

Despite these warnings, President Bush proposes accelerating deployment and spending \$3 billion more for all missile defense next year - a 57 percent increase. The Pentagon will move to deploy a "rudimentary" system, even before this limited and flawed testing is complete, just to build "something" by the politically significant date of 2004.

As Congress examines the president's missile defense program, and as the administration begins testing components of the system this weekend, I submit that the 52 recommendations in the Coyle report should be the minimum standard by which the new program is evaluated. And the Pentagon's "you-can't-handle-the-truth" attitude that kept this report bottled up for eight months must give way to a constructive and reasoned public dialogue based on full disclosure and honest information.

Absent that, the Pentagon might consider those \$640 toilets as a more reliable way to dispose of the \$200 billion to \$300 billion that this flawed system could cost our nation.

John F. Tierney of Massachusetts is a Democratic member of the US House of Representatives.



Senator CLELAND. Why are we in such a hurry to spend an additional \$3 billion on National Missile Defense? It is termed National Missile Defense in the law. I can find no good reason to justify the increase. I think it is unconscionable when our servicemen and women are flying aircraft that are 18 to 22 years of age. It is unconscionable when American pilots flying foreign-built fighters defeat those flying our own equipment in 90 percent of training engagements. That is one reason why I am so big on the F-22. It is unconscionable when we are procuring ships at a rate that will erode our Navy to a level of ships well below that which is reasonable to meet our requirements, and it is unconscionable when 70 percent of our Army's major combat systems are more than half-way through their projected service lives.

I just state quite sincerely that I was as much for a theater missile defense as anyone and the technology involved in it. But in a fiscal environment that precludes us from meeting our legitimate bread and butter needs, in a global security environment that presents us with a multitude of potential threats more imminent than missiles not yet off the drawing board, I cannot look the taxpayers of this country and of my state in the eye and tell them that this is a worthy expenditure of their money. I am convinced that this NMD effort is something we need to take a strong look at and that Congress ought to use the power of the purse in rejecting this increase.

Thank you very much, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Cleland.

Senator Bunning.

Senator BUNNING. Thank you, Mr. Chairman.

First of all, I would like to thank both the Secretary and the General for their clarity and straightforwardness in answering questions and discussing our National Missile Defense and all theater missile defenses and for the notification of Russia and our allies that we intend to go forward with this defense system. The first priority in the Constitution is national defense, and things certainly have changed since 1972 and we are now in the year 2001 and spending money to defend the United States of America from intercontinental ballistic missiles ought to be the top priority that we have. I congratulate you on making that decision and doing what is necessary to defend the majority of our American people.

General Kadish, are you positive the technology is there to build this system?

General KADISH. I guess the way I would answer that is that at this point for the technologies we are pursuing, there are no inventions required to do it. It is a matter of very difficult engineering activities. Then as we pursue some of the additional ideas that might come out of this new process, because of treaty issues and other activities we did not explore very much, there may be some new technologies that could be applied. So, it is an engineering challenge rather than an invention challenge for the types of systems that we are looking at very early in this process.

Senator BUNNING. Secretary Wolfowitz, I just came back from Seoul, Korea. There are about 45 million people in the greater Seoul area. The North Koreans have just moved up their conventional artillery 10 miles behind the 38th parallel. Not only do we

face the nuclear threat out of North Korea but a conventional weapons threat. Do we have anything possible in our systems right now if North Korea decided to pull the trigger on the conventional weapons? Could we defend ourselves and our 35,000 to 38,000, depending on what time of the year it is, American troops that are there?

Secretary WOLFOWITZ. Against conventional ballistic missiles, our capability is negligible.

I would like to make this also an answer to some of Senator Cleland's comments before. The theater missile threat, as you were describing it, is very real and very urgent. There are hundreds of those North Korean conventionally armed missiles. Some may have chemical weapons on them.

Frankly, I do believe, particularly when we are talking about conventional missiles, if you can take out 50 percent of them, that is a heck of a lot better than 0. During the Gulf War with the PAC-2, which was a lot less than 50 percent, there was not a single ally or a single commander who did not clamor for more.

We are adding a substantial amount of money. I believe it is on the order—and General Kadish can correct me—of \$1.5 billion, Senator Cleland, in this increase goes exclusively for theater missile defense.

Another large part of what we are doing is dual capable. I bring up, as I said before, the airborne laser, which when it starts to shoot down missiles will be a clear violation of the ABM Treaty, whether those missiles are heading for Los Angeles or heading for Seoul, because it shoots them down in the boost phase when it cannot tell the difference, unless we are going to start putting software in to tell it you can only shoot down missiles of a certain limited boost capability.

That threat is very real. I agree strongly with Senator Cleland on the urgency of dealing with the theater missile threat, but what I would also urge all of your colleagues to consider is that the more serious we are across the board, the more our capability will be across the board. By pursuing defenses against long-range missiles, we develop technologies that are also useful against shorter-range missiles and vice versa. Frankly, if it has taken us more than 10 years to field PAC-3, I have to conclude we have not yet been serious as a country. It is time to be serious.

Senator BUNNING. In other words, the money we are devoting to the upgrade of not only theater missile defense but National Missile Defense is a priority that should be at the top of the list not down the list.

Secretary WOLFOWITZ. In fact, every theater commander will tell you that is his biggest vulnerability. Again, I believe strongly in investing in ships and aircraft, and I wish we had more money to spend on them. But in a war in Korea, many of our air bases could be rendered completely useless, many of our ships would be sunk by a ballistic missile attack. It is a critical deficiency in our military capability in both that theater and in the Persian Gulf.

Senator BUNNING. I suggest that everybody on the Armed Services Committee that has not been to the 38th parallel can look just 10 miles north and see the encampment and the batteries that have been moved in place that expose 45 million people to, my God,

who knows what, whether there is nuclear or whether—if it is just conventional warheads on those, we would have a slaughter that would shock not only our own people in the United States, but would put in jeopardy all of the 35,000 or 38,000 U.S. service people that are there to defend and help defend and enforce the 1953 cease-fire that was put in force.

So, I want to thank you for going forward with this and make it as fast and quick as possible.

Secretary WOLFOWITZ. Thank you, Senator.

By the way, the increasing range of North Korean missiles means that it is not just South Korean facilities that are at risk. Everything in Japan—

Senator BUNNING. No. I am just talking about those bases. The other ones are capable of reaching the United States of America.

Thank you.

Chairman LEVIN. Thank you, Senator Bunning.

Senator Reed.

Senator REED. Thank you very much, Mr. Chairman. Thank you, Mr. Secretary, General Kadish.

This morning's testimony, together with other positions of the administration with respect to the Comprehensive Test Ban Treaty (CTBT) and others, raises great concerns because I believe what is happening is there is conscious rejection of arms control as a central tenet of American foreign policy, and by that I mean an endeavor, through bilateral and multilateral agreements, not just to limit weapons, but to create a stable strategic structure. I know the Secretary has indicated that you intend to talk to the Russians, but the definite insistence that, regardless of the result of those discussions, you will proceed with these plans, suggests that that is less than an invitation to negotiations and more of a demand for acquiescence, which is very difficult to achieve in the international arena.

What I have heard this morning I would sum up as the four noes. No specifics with respect to a deployable system. No cost estimates with respect to the life cycle of a deployable system. No agreement with our allies, both our old allies and our newfound allies, and most emphatically, no ABM.

Now, let me turn to some specific issues. Mr. Secretary, you have several times referred to the reduction of our missiles as part of this new framework, making specific reference to Peacekeeper. Yesterday we had the opportunity in the Strategic Subcommittee to discuss these issues with Admiral Mies and General Blaisdell and Admiral Dwyer. You have budgeted \$5 million to acquire some equipment to begin the preparation for the reduction and elimination of the Peacekeeper.

We are told that is less than a third of what is necessary. There is absolutely no provision going forward that we were shown to suggest that you have budgeted the approximately \$500 million necessary to actually retire the Peacekeeper missile. So, your words today do not seem to be supported by your budget proposals in this budget and looking forward to 2003. Is that accurate?

Secretary WOLFOWITZ. I would have to get the details, Senator, because you are asking me something I am not completely certain about, but I believe the remaining funds would be coming in 2003

and possibly future years, although I assumed we would be finished in 2003. You do not have a 2003 budget request yet. You have an old 2003 budget that did not plan for Peacekeeper in or Peacekeeper out.

Senator REED. I understand that, Mr. Secretary.

Secretary WOLFOWITZ. The clear intent is to retire Peacekeeper.

Senator REED. Well, if that is your clear intent, then you are grossly underfunding the first preliminary step in terms of acquiring equipment to do that, and you apparently have not made any provisions, at least not to the awareness of Strategic Command, to fund the approximately \$500 million that will be necessary to do that.

Again, when not just the Senate but the world looks at our words and then looks at our budget, if there is a discontinuity, then I think they will tend to look more at the budget than our words.

General Kadish, the proposed budget dedicates funds to something called space-based kinetic. Is it right to assume this is a Brilliant Pebbles type system? If so, I have some specific questions. Are you planning to ultimately deploy a space-based interceptor system if the technology works?

General KADISH. The line also includes sea-based kinetic as well. So, this is an effort to define how we can do boost phase kinetic energy intercepts as a hedge against the directed energy that we have in that area, namely the airborne laser. There has been very little work done on that in the last few years.

The situation we face with kinetic energy boost phase interceptors, terrestrially based, is that you have to catch an accelerating missile with another accelerating missile that is launched many minutes after the first one. Overtaking and intercepting an accelerating missile is a very tough challenge. So, we are going to explore that area with the monies involved.

We have an additional effort to look at an experiment doing the same from space because you are in a better position to do that, and that has some legacy back to Brilliant Pebbles but it is not a major effort at the beginning to look at that as part of our architecture other than to do the early experiments.

Senator REED. But if these experiments prove to be effective, there is a possibility that you could propose to deploy a system of satellites in order to acquire these targets and essentially put in a space-based system. Is that correct?

General KADISH. That would just be one of the many hundreds of decisions that have to be made about how the architecture develops in an incremental way. That is certainly not imminent in our program right now.

Senator REED. It is not imminent, but we have heard repeatedly in the discussions, both your responses and my colleagues', that Russia, China, no one has anything to fear with the proposals that we are talking about today in this budget. Yet, you are beginning to do research which could create a space-based interceptor system, which unlike the airborne laser needs to be closely proximate to the threat area, and could effectively interdict Russian or Chinese missiles. Is that correct?

General KADISH. Well, Senator, if my memory serves me, we got \$5 million out of a \$7 billion budget to look at that effort.

Senator REED. General, you know I will not quibble with you on the dollars, but essentially you are beginning to investigate possibilities that could, in fact, raise legitimate concerns from a technical point with both the Russians and the Chinese. Is that fair?

General KADISH. I am not sure exactly what their concerns would be.

Senator REED. Let me put it this way. If Russia had a system in space that was capable of intercepting our Intercontinental Ballistic Missiles (ICBMs) when they left our launch pad, would you be concerned?

General KADISH. I am always paranoid about those types of things. That is what you pay me for. [Laughter.]

I guess it is a strategic framework issue, and maybe the Secretary should answer that from a policy—

Senator REED. My time has expired, but if—Mr. Chairman?

Chairman LEVIN. Yes.

Secretary WOLFOWITZ. I would say, Senator, that we are years away from anything of that kind. Whether it is in space in Russian altitudes or in space over Iranian altitudes or Iraqi altitudes, for example, would make all the difference in the world. But we are just years away from that. As the General said, it is a very small piece of the program. But I think it is important to try to understand what the technological possibilities are.

We are looking for a relationship with Russia where we are not threatening one another. We have already moved significantly in that direction. We have a much longer way to go.

Senator REED. Mr. Secretary, if I may, but if you would throw off an ABM Treaty, this research could—there is no constraint on deploying a system such as this if it proves out technically. Is that correct?

Secretary WOLFOWITZ. Unless we came to some different agreement with the Russians that constrained it, or unless we decided politically to constrain it because it was a matter of concern, or unless we limited it in a way that made it clear to the Russians that it was not a matter of concern. We could perhaps do it cooperatively because we are both vulnerable to those kinds of attacks.

We are talking about something that is at least 10 years away from even being something that you could talk about concretely. By that time, I would hope the U.S.-Russian relationship is genuinely transformed and then, in fact, we could talk about whether those capabilities could be mutually beneficial if deployed in the right way or the right numbers.

Lord knows neither of us want to be vulnerable to an accidental attack by the other side. If you asked me, would I feel threatened if the Russians had a limited capability to shoot down an accidentally launched American ICBM, I would feel much more comfortable if they had that capability than if they are primed, as they are today, to launch on warning. They nearly launched a few years ago when they saw a Norwegian weather rocket. I would feel so much safer if they had some ability to defend against a limited attack than if they sit there thinking that launch on warning is the answer.

So, I am not trying to be contentious. We are miles down the road. We are trying to develop a relationship with the Russians

where we are talking regularly and frequently about where we are heading in our defense programs across the board from a perspective of essentially common interests, which I think are growing.

Senator REED. Mr. Secretary, my colleagues have been very kind, but let me say it is not just a question of how far down the road we are going. It is what roads we are taking. I think this is a critical issue.

Thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Reed.

Senator SESSIONS.

Senator SESSIONS. Thank you, Mr. Chairman. I thank Secretary Wolfowitz and General Kadish for I think a ringing call to reality to face the fact that the world has changed and we have different threats. Jim Inhofe referred to Henry Kissinger. I believe one of the statements I heard him make was that he never heard of a country whose policy it was to keep itself vulnerable to attack when we have the ability to defend ourselves from attack.

Secretary Wolfowitz, you served on a commission to examine this, a bipartisan commission when President Clinton was in office. Would you tell us how many people served on that commission, the makeup of it, and what your conclusion was?

Secretary WOLFOWITZ. In fact, it was known as the Rumsfeld Commission because Don Rumsfeld—I guess he was already Secretary Rumsfeld by that time—was the chairman of the commission. There were nine of us, five Republicans, four Democrats. Very diverse points of view. I felt honored to be included among those people.

Senator SESSIONS. The commission rendered a unanimous report, did it not?

Secretary WOLFOWITZ. It did, and I think that surprised all of us. We came in there with very diverse points of view. Our mandate was—let me emphasize—not to assess how to deal with this problem. It was to assess what the problem was. If we had been asked to recommend how to deal with it, you would have probably had 11 different solutions from our nine members. But on assessing what the threat was, we came to a degree of unanimity that surprised me and I think surprised everyone. It happened because the more we dug into the facts, the more astonished we were at how rapidly this ballistic missile technology had proliferated, how much the various bad actors were cooperating with one another, sharing technology with one another, and how aggressively this had all moved forward.

Senator SESSIONS. Well, I think you found that in 1972 nine nations had ballistic missiles and now we have 29 nations with ballistic missiles. Those things I think are important.

As to what is unconscionable, I think it is unconscionable for us to have the President of the United States handcuffed in the ability to take strong action around the world because in doing so, he might subject the American people to a missile attack. It is that fundamental to me.

Now, with regard to the Soviet Union, which is gone, and the now existing Russia, it is my great hope and belief that we can reach a peaceful partnership between those two countries and that we can move forward carefully to expand that friendship in a way

that we cannot even imagine today. Nothing would be better for the world, and I think we have every reason to believe that is possible.

But is it not true that we have a treaty with Russia, the ABM Treaty—presumably it is still a treaty—and that agreement does not impact any of the other nations around the world who have these ballistic missiles? It does not bind them. Is that right?

Secretary WOLFOWITZ. That is correct, although some of them feel it should bind us, but it does not bind them.

Senator SESSIONS. So, what we are saying is this agreement we have with Russia over how we are going to conduct our bilateral relations beginning in 1972 is now a major detriment to our ability to protect ourselves from North Korea or some other nation that may decide to attack us with a ballistic missile.

Secretary WOLFOWITZ. Or from even a limited accidental attack.

Senator SESSIONS. It might come from one of the Russian missiles.

Secretary WOLFOWITZ. It could.

Senator SESSIONS. So, to me we are in a new world here. We are holding on to this relic of the Cold War, this agreement between the United States and a nation that no longer exists, the Soviet Union, and we are denying ourselves the ability to prepare a defense against attack by missiles from any other country in the world. Is that fair to say?

Secretary WOLFOWITZ. I think that is pretty accurate.

Senator SESSIONS. Are you familiar with the 1999 legislation, Secretary Wolfowitz, that the Senate passed 97 to 3 to move forward with a National Missile Defense, to deploy it as soon as we are technologically able to do so?

Secretary WOLFOWITZ. Yes, I am.

Senator SESSIONS. I know the chairman mentioned that President Clinton, when he signed it, made a statement that did not make any reference to the abrogation of the ABM Treaty or not. But that language is not a part of the law of the United States, is it?

Secretary WOLFOWITZ. I am not a lawyer. I will not try to practice without a license. But I think not.

Senator SESSIONS. I think not also. I am a poor lawyer and I do not think that a piece of legislation can be changed by a statement made at the time the President signed it if it is not made a part of that legislation. So, that is not a factor here.

Secretary Wolfowitz, is it your view that it is now time in this post-Cold War period for us to reassess how we are going to defend America, what the threats are to America? Do you consider it your challenge to analyze this situation and move us into a new period to deal with the changed threats to America? Is that what the President has directed you to do?

Secretary WOLFOWITZ. Yes, Senator, but can I also make a bipartisan appeal? I think it is much broader than just rethinking those threats and developing the abilities to defend against them. It is also a matter of rethinking the whole relationship with Russia.

I think General Kadish was a little nonplussed at the question of how we would feel about a Russian ability to shoot down an American ICBM. I do not mean to suggest that my good colleague

here is mired in the Cold War, but frankly I think we need to think about an era in which, if the Russians have a capability to shoot down an accidentally launched American missile, we will understand that to be in our interest just as it is in their interests if we are not vulnerable to their accidental attack. If we could pass an agreement that abolished all ballistic missiles in the world, we would probably be a lot better off. We cannot do that, but let us move away from the mind-set that said stability rests on the ability of Moscow and Washington to push a button and be absolutely sure within 30 minutes they had annihilated the other country. It is absolutely appalling.

Senator Cleland said it worked 100 percent. It worked 100 percent for a limited amount of time. I lived through the 1962 Cuban missile crisis, old enough to be pretty darned scared. I do not think it is the greatest system in the world, but a big change in thinking is necessary to get beyond it.

Again, I am going to pick on General Kadish because he is here and he is useful. The fact that somebody as forward thinking as my colleague here has a little bit of trouble thinking that way, imagine the mental changes, the intellectual changes we are asking of the Russians who in many ways are much more mired in the Cold War than anyone you could find in this country.

But let us think beyond not just in terms of defenses, but in terms of our whole relationship with Russia. It is a different country. It is a brand new country. It will never be the threat to the United States that the Soviet Union was, and frankly I think it can be a real partner because if you look around the world at real stability, which in my view is not the stability that comes from mutual annihilation, it is the stability that comes from a stable Europe. It is the stability that comes from a stable Northeast Asia. It is the stability that comes from a stable Persian Gulf. Those three critical parts of the world are right around the border of Russia. They are not interested—they should not be. Sometimes they act contrary to their interests, I think. We need to try to talk them out of that. But Russia's interests are served by stability in those regions just as ours are served. We ought to be aiming at a relationship that is based on that kind of interest in mutual stability, not the interest in mutual annihilation.

Senator SESSIONS. Well, I thank you for that wonderful response. I think you are right and I think your concern that we need to be able to defend ourselves from other threats around the world that are growing and becoming more sophisticated is legitimate. I thank you for having the courage to articulate a new vision for America's defenses. Thank you very much.

Secretary WOLFOWITZ. Thank you, Senator.

Chairman LEVIN. Thank you, Senator Sessions.

Senator Dayton.

Senator DAYTON. Thank you, Mr. Chairman.

Gentlemen, I share with the President and with your administration, being newly arrived in Washington, in our responsibilities in January of this year. So, from the outset, I have thought that the administration's request for the broadest possible latitude in developing its plans and the budget were appropriate and I think they have been supported by Congress with, among other things, what

I am told was an unprecedented provision in the budget resolution that permitted the Secretary of Defense, subsequent to the adoption of that resolution, and the chairman of the two budget committees to put in what had not been contemplated until that time. So, I think Congress has been responsive and supportive.

I would say that my own view is, before today's testimony, that there has been a reprehensible lack of detail and even at times candor about these enormously consequential decisions that you are making and we are being asked to concur with. I support entirely what Chairman Levin recounted in terms of the difficulty of obtaining accurate information. I noted that you, Mr. Secretary, respectfully had a different perspective, which is understandable, from the chairman in your response to Senator Lieberman.

I would just go back again and say that if you reviewed the prepared testimony of the Secretary on June 21 and June 28 of this year and his response to questions posed here, to hear this now, 2 weeks later, it has either been a great intellectual leap forward or it has been a matter of, I think, difficulty for this committee to obtain the information that I would believe I and others are entitled to in order to carry forward our responsibilities.

I would just say, again from my own personal experience, I have learned more information about your intentions by watching and reading the independent news reports than I have from any hearing in this room or even in closed session and executive session. I think that is antithetical in terms of what you are talking about here in terms of a collaboration and a partnership.

I think it would be one thing to ask for that kind of latitude and ambiguity if what you were discussing or proposing is the continuation of essentially the previous and generally accepted military and diplomatic strategy rather than what is in this case a very dramatic and even radical departure from both prior military theory and strategy, as well as what is contemplated to be an abrupt rupture of a longstanding international arms control agreement.

I would say today's testimony is the first real specificity and I certainly trust the veracity that has been forthcoming and I commend you for that. I think perhaps now on the basis of this—and I would certainly second what the chairman, Senator Lieberman, and others have said in urging you to make this the new hallmark and trademark of this relationship, that perhaps this committee and Congress can now begin to engage in the same process that the administration claims it is pursuing with its allies and its former adversaries—that is a discussion and a debate about the merits and the demerits of these momentous decisions.

I recall the very distinguished former chairman of this committee, the Senator from Virginia, noted the word "partnership" between Congress and the administration, and I think that is appropriate to ask for. In my business and professional experience, the partnership requires that I know who or what my partner really is and that I will be consulted and informed rather than engaged in an intellectual game of hide and seek where words are often more intended to evade and even to mislead than to inform and then finally being told what the administration has already decided it is going to do and asked to concur with that under the guise of partnership and patriotism.

I would also like to say to you in partial response to some observations that have been made by other members of this committee that I do not think there is anybody on this committee or anybody in Congress or in this administration or I believe in former administrations who does not want to make this country safer and more secure, who does not want to reduce the chance of nuclear war and annihilation anywhere and everywhere in this world. But I think we can admit that we need to have an honest debate and even disagreement about how best to achieve those conditions. I hope we can proceed on that basis.

I guess I would ask, Mr. Secretary, in your testimony you said that this system will not undermine arms control or spark an arms race. If anything, defenses will reduce the value of ballistic missiles and thus remove incentives for their development and proliferation. Are you willing to acknowledge that that constitutes at least a significant departure from previously established U.S. military theory and strategy?

I recall that the former Chairman of the Joint Chiefs of Staff, General Shalikashvili said words to the effect that any new defensive system creates a new wave of offensive systems and technology. You referred to the former Soviet Union, Russia, and our hope for a new relationship there. But as you yourself have noted, sir, this world is in a constant state of flux. Is it reasonable to assume that setting up this kind of multi-layered defense system is not going to spawn worldwide an attempt to develop offensive systems of greater ability to evade and destroy?

Secretary WOLFOWITZ. Before I answer that question, let me just address very briefly the concern you stated at the outset. I really do not believe in intellectual games of hide and seek. I do not believe I have ever practiced them in my dealings with Congress.

Senator DAYTON. When I referred to you, sir, I am speaking in general terms.

Secretary WOLFOWITZ. Well, I understand what you are saying, and I am understanding the desire of this committee and the whole Congress to be as well informed as possible on these crucial issues. We will do our level best to give you that information.

One of the reasons that some of these independent news reports tell you things that we have not told you is because sometimes they know things that we do not know and some of those things are not true. You get a contractor who has a gleam in his eye about some way that General Kadish can help keep him going, and before you know it, there is a story in some newspaper that says we are actively considering or maybe even have decided. We have to be a lot more careful before we come up with something that is actually a program. Even when we have a program, as we have tried to explain, programs change, especially development programs, in the course of testing.

So, as far as I am aware, there has been no effort to conceal. There has been a genuine difficulty in absorbing a lot of change, a lot of facts in a really relatively short period of time. As you alluded to, Senator, this is not the only issue on which we have been having to scramble hard. So, I appreciate your indulgence, and I hope that you will take this testimony today as a significant measure of trying to respond to those concerns. Quite honestly, I would

acknowledge that I think the mere scheduling of this hearing has flushed a lot more information up in our system to higher levels, and that has been useful.

On the question you raised about defenses spawning a new arms race, at the risk of picking a fight with an even higher ranking general, or at least an intellectual argument, I think that thinking is a vestige of the Cold War. There is no reason for the Russians to start taking their scarce resources and investing them in new nuclear systems because we build a very limited capability to shoot down an accidental launch or a North Korean or Iranian ballistic missile. I do not honestly believe they will. I think they might come and ask us for some relief from some of the arms control restrictions that are going to end up costing them money because their security problems are above all economic security problems.

But you have to take each of these things I think in very specific context. I used in my testimony the example of what American naval supremacy—in fact, you could go back further and say Anglo-American naval supremacy—has done to piracy. People, except in fairly remote parts of the world, do not invest in big pirate fleets because they cannot succeed. In fact, very few countries invest in big navies because they cannot challenge us. So, the effect of our improving missile defense capability I think will be to discourage countries from following the path of North Korea and Iran and maybe even discourage North Korea and Iran from investing so heavily in those capabilities.

You have to take it case by case. You have to look carefully. But I really do believe that it is a nontrivial fact that this is the one capability where Iraq did better than expected in the Gulf War. It is the one Achilles' heel of the American military. The reason these countries are putting so much money into ballistic missile capabilities, conventional and non-conventional, has to be because they cannot beat us any other way, and they see this as a vulnerability. I think it is a vulnerability we should close.

Senator DAYTON. I thank you again for your specificity and candor and the diligence you are putting into this. You have an enormous responsibility and we want to share that with you.

Thank you, Mr. Chairman. My time has expired.

Secretary WOLFOWITZ. Thank you, Senator Dayton.

Chairman LEVIN. Thank you very much, Senator Dayton.

Senator Allard.

Let me, before you start, indicate where we are. We have two votes that are now scheduled. The first vote began just a few minutes ago. After Senator Allard, we have Senator Nelson for the first round. There may be other Senators who come for their first round, and the question is how do we proceed to our second and third rounds?

One possibility, because there is a huge amount of material here which we have not yet proceeded to discuss—I guess the possibility that I want to talk to Senator Warner about is that given the fact that we have a subcommittee meeting this afternoon and that we have much material to cover, that after everybody concludes their first round here—we will call on Senator Allard in a moment because he can get his questions in before the first vote is over. I am not sure that Senator Nelson will be able to do that—that we then

adjourn this hearing until next Tuesday where we had an open slot and we pick up at that point. It is either that or we go after lunch, which would create a conflict I think with the subcommittee, which we would like to avoid.

So, this is no way to consult on this publicly, but we do not have much choice.

Senator WARNER. I am just wondering. If I were to go vote right now and Senator Allard used the time for his questions, then you and I each have a follow-on round, I think we could almost continuously use the time between now and, say, 1:30 and conclude this hearing. I am prepared to do that.

Chairman LEVIN. Is that agreeable with you, that you stay here until 1:30 if we are able to conclude by then? If I make an assessment that we can conclude—I would like to talk to other members of the committee, but assuming that we reach that assessment, are you able to stay that late?

Secretary WOLFOWITZ. Yes, I will be a little late to something else, but this is more important.

Chairman LEVIN. You can do that.

Senator Dayton.

Senator DAYTON. We have received an enormous amount of information today, and given the importance of this subject, I think I would be better prepared, others perhaps as well, to come back next Tuesday and ask a follow-up round of questions.

Chairman LEVIN. I think I am going to proceed that way for this reason, and I hate to do it, given Senator Warner's suggestion, which is somewhat different. But we did not have your testimony until this morning. We expect it 48 hours in advance under our rules. You were asked about that at your confirmation. This is a hugely important subject. Given the fact that we have this problem now and that we need time to digest that testimony, I think what we will do is after everyone's first round here now, we will adjourn this until next Tuesday, if that is an agreeable time with the ranking member. If that is not an agreeable time, we will pick this up at another date which is agreeable with the ranking member. There is just too much material here to squeeze in this way.

Senator WARNER. Mr. Chairman, we accept your perfect right to schedule for next Tuesday, but I would like that you and I at least have the opportunity—I have purposely withheld one or two observations until I could have the benefit of hearing all colleagues comment on this. So, I do have some concluding remarks about what I think has been an extraordinarily successful hearing.

Chairman LEVIN. We will do that. After everybody's first round here today, you and I will then take a few minutes to wind up today. We will then adjourn until next Tuesday, at least tentatively, at the same time. We will now call upon Senator Allard.

Senator BEN NELSON. Mr. Chairman, does that mean that I would go ahead and do mine next Tuesday or whenever it is set?

Chairman LEVIN. No. If you can squeeze it in today, definitely. Anybody who has not had a first round today will have an opportunity today to do their first round.

Senator BEN NELSON. Come back after the two votes?

Chairman LEVIN. After the two votes, absolutely.

Senator BEN NELSON. OK, thank you.

Senator ALLARD. Thank you, Mr. Chairman.

I would like to commend the panel on their great presentation today. I have watched the presentation by General Kadish in the past where he showed the technology, that we do have the capability to use a missile to hit another missile during flight. I think that is phenomenal technology and every time I see that, I am continually amazed. It demonstrates to me that we are clearly on the way technologically to being able to even apply that kind of technology to longer-range missiles, and I am confident that we are moving in the right direction technologically and showing that that can technologically be done.

The other thing that particularly amazes me is that the argument is made that somehow or other we are perpetuating a nuclear arms race because we are just responding to what other nations are doing throughout the world. I was struck by your statement that we now have some 28 countries that have ballistic missiles. We have some 12 countries that are developing the ability to have a nuclear program.

Yet, when we come forward and this administration comes forward with a proposal that says that we are going to move from strictly an offensive posture established during the Cold War and we are going to begin to look more closely at a truly defensive way of protecting ourselves and that even when the administration has said, look, we are willing to even step ahead of any treaty that we have signed and reduce our nuclear warhead capability below what is being called for in any other treaties that we have signed, that somehow or other we are accused of moving towards some kind of an arms race.

From what I see out of this administration, there is a definite commitment to bring about world peace. I commend the President for reaching out to our allies. He has really just started that process. I think he has a long ways to go, but I think it will work and I think it is the right thing to do. I think that we need to move ahead with our own technology, and I am impressed with what the panel has presented to this committee here today.

Senator Levin, chairman of the committee here, had raised concerns that the ballistic missile budget before us had not been fully vetted, in other words, had not been looked at as to whether it was complying with the treaties and the review process. But I understand that the BMDO budgets have never been fully vetted when they have been submitted to Congress. In fact, they have never been fully vetted even after they have passed Congress. I am told, for example, that the Compliance Review Group certified your last long-range missile defense test on June 30, 2000, and the test took place on June 8, 2000.

So, the question I have is, does the process to determine the compliance of program activities during the budget cycle differ significantly from the process used in past years? In other words, you are using the same budget process as far as the vetting process as we have ever done in that past. We have not deviated from that, have we?

General KADISH. No, Senator. We are using the same compliance review process, but that will be adjusted somewhat I think to en-

sure that we put more attention than we have in the past on that, given the Secretary's interest in this subject.

Senator ALLARD. Which shows again a commitment I think by the administration to try and comply and work with our allies.

I want to follow that up with another question. Is it not true that compliance certification usually comes in only a matter of days to months prior to the test event?

General KADISH. That has been true in the past because there is so much analysis that goes into those compliance reviews of testing activities. So, many times we do not know exactly the final configuration of the test until days beforehand or weeks beforehand. We are trying to improve that, but that is just a fact of life. Therefore, the final compliance certification tends to follow those decisions in the program. So, we have had that situation I think in the past few tests that we have done.

Senator ALLARD. Were you going to comment, Secretary Wolfowitz?

Secretary WOLFOWITZ. Well, my first comment, Senator, is you have just informed me of something rather significant that I did not know about before that we certified a test after it had been conducted. So, obviously, there is more I have to understand about this arcane process than I knew before I came here. Obviously, we have to make it work in a way that gets information on these legal judgments to the President and to Congress in a more timely way than that particular example suggests, but at this moment I cannot tell you how we are going to do that exactly.

Senator ALLARD. According to my information, it was a week before.

My understanding is that I have a vote on the floor. I am the only one here in the committee, so I am going to put it in recess so I do not miss my vote. Then when I return, I will finish my question period. I will put the committee in recess. [Recess.]

I would like to go ahead and call the Armed Services Committee back to order. When you are at the first of the alphabet and you get a chance to vote first, sometimes there is an advantage. So, I was the last to leave and first to arrive.

I will continue to use my time to question the panelists, I would like to move forward with my questioning by addressing this to General Kadish.

In your testimony, you spoke about a significant effort to improve your testing capabilities in the Pacific. As I recall, the realism of your testing program has been criticized considerably not only by individuals like Mr. Coyle, who is the former Director of Operational Testing and Evaluation, but also by groups like the Union of Concerned Scientists and even some Members of Congress.

In fact, Mr. Coyle made the following recommendations in his NMD DRR report, "Current test range limitations need to be removed to adequately test the NMD system. Target trajectories or radar surrogate locations need to be changed." It goes on to say that "flight testing artificialities must be eliminated. Multiple engagements must be accomplished. This type of engagement should have flown in integrated flight tests before OT&E."

The Union of Concerned Scientists stated that testing should be conducted—and I quote them—"under realistic conditions."

The GAO had cited in their May 20, 2000 report—and I quote that report—“A number of test limitations affect the ability to test, analyze, and evaluate system performance.”

Now, it seems to me that the test bed you are proposing should go a long way towards answering the criticism that I have just mentioned. In fact, it seems that it is a much better way to test the systems we are trying to develop. Could you comment on the advantages of the test bed that you are proposing?

General KADISH. You are exactly right, Senator. In fact, all of those recommendations have been, in one way or another, incorporated into this test bed idea because the best way to test against a long-range missile threat in a midcourse type system, whether it is ground-based or, for that matter, sea-based, is to do it the way you plan to operate.

This test bed in the Pacific, with elements at Fort Greely and Kodiak, Alaska, and at Kwajalein and Vandenberg, and other elements, does exactly that. To the best of our ability, it replicates an operationally realistic test arrangement. That gives us many more geometries to test against. It gives us much more flexibility and realism to test the communications and command and control, as well as reliability and maintainability of the systems. It provides us with a lot more information than we had planned to get. But it is expensive.

Senator ALLARD. Now, as I had mentioned in some of my remarks earlier, the President has proposed a new strategic framework that relies on a mix of offensive nuclear forces, missile defenses, and nonproliferation efforts. I wondered if the panel would elucidate again what you see as the fundamental differences between deterrence during the Cold War and the 21st century challenge.

Secretary WOLFOWITZ. I guess the heart of it comes down to who it is you are trying to deter and what you are trying to deter them from doing.

While there were many other concerns that we had during the Cold War, I think our whole nuclear posture, the whole structure of arms control during the Cold War was driven by the fact that there were 23 Soviet divisions, heavy divisions, in eastern Germany. There were some 100, more or less, divisions backing them up all the way to the Urals. They had operational plans to, in the event of war, move within a matter of a few weeks to the English Channel. We on the other side went from planning to deal with that with tactical nuclear weapons to planning to deal with it with increasing levels of long-range nuclear weapons, and the Soviets responded in kind. So, we had a hair trigger situation built on a major military confrontation in the heart of Europe.

What we have today is something very different. The relationship with Russia is just completely transformed. It bears no similarity to the old Soviet Union, and I would submit not only are we not enemies, but as I said to one of your colleagues earlier, I believe we have a real interest in mutual stability, but it is not the mutual stability that comes from mutual annihilation. It is the mutual stability that comes from stability in Europe, stability in East Asia, and stability in the Persian Gulf.

The people we are trying to deter are a number of countries whose hostility in the United States and hostility to its friends has been made abundantly clear. What they are really trying to do, as exemplified in some ways by the Gulf War, is find ways to keep us from applying our unquestioned conventional superiority to protect our friends and allies from threats from those countries.

If you imagine what the Gulf War crisis would have been if Saddam Hussein had had the capability to threaten Tokyo and Paris and London with nuclear armed ballistic missiles or, even worse, if he could have threatened Washington with nuclear armed ballistic missiles, maybe we would have gone ahead in just the same way that we proceeded. I question that. I question even more whether our allies would have proceeded in that way.

So, what we are trying to do is add to the obvious, enormous offensive nuclear capability we have relative to any of those small countries and to the impressive conventional capability that we have an ability to protect against limited attacks and to deny them, as much as we possibly can, that option of blackmailing us or blackmailing our friends.

In this framework, I think the larger efforts of nonproliferation and counterproliferation loom much larger as well. The Soviet Union's capabilities were almost entirely indigenous, although we did make a big effort to make sure that they did not get help from our friends and allies. In the case of these countries, they all depend on a great deal of help from other places, and we cannot cut off all of it. We cannot stop North Korea from cooperating with Iraq. But we can try to prevent France and Japan from cooperating with Iraq or North Korea. So, that has to be another major piece of preventing these threats from emerging.

Senator ALLARD. Thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Allard.

Senator Nelson.

Senator BEN NELSON. Thank you, Mr. Chairman.

First of all, I want to thank both of you, Mr. Secretary and General Kadish, for being here today. I appreciate the opportunity to learn more about missile defense and some of the other issues that are extremely important to national defense.

I have a lot of questions about missile defense, but personally I think it is important to say that we should never say no to missile defense outright. There are some who say absolutely yes and there are some who say absolutely no. I want it clear that I am saying maybe. Maybe not because I do not think there is a legitimate threat. I think there is a legitimate concern from the so-called rogue nations, that they might launch toward us. I think there is a legitimate concern about accidental launch. I think these are certainly things that we do need to take into account.

But I want to be assured that sufficient research has been done and is being done so that we can determine if missile defense is even possible and how likely it is that it is going to work because it is a cost-benefit analysis in many respects. It is certainly a personal safety and humankind safety issue as well.

But what we are being asked to do is to consider it in terms of the overall budget for defense and how it might relate to taking money away from other threats that are very likely. Biological war-

fare is clearly very possible or chemical warfare or even another weapon of mass destruction being delivered through another mechanism.

So, I want to make sure that what we do is based on sound science and that our cost-benefit analysis is thorough.

I have asked the Secretary if he could give me some idea of a percentage of success that we might be able to evaluate to determine whether or not missile defense is possible, whether it truly is the kind of security that we would want it to be if we are going to spend that kind of money.

I have heard the argument that at least it is a scarecrow. I come from an agricultural state, and I know my Nebraska farmers would not put a scarecrow out that did not scare crows and they would not call it a scarecrow if it did not scare crows. They would want to know how much that scarecrow costs before they invested in it and whether on a cost-benefit basis it was going to be worthwhile.

What I am leading up to is that I want to make sure that we have done everything that we can in this arena because I am worried that we are inching our way toward deployment before I have received answers to my questions. I think whether it is a runaway train that is heading down the track or whether it is boiling a lobster slowly or whatever it is, I think there is a decision made that we are going to have it and we are going to have it regardless. I hope that is not the case, but everything that I hear, everything that I see would almost lead me to that conclusion.

I do not want to be a cynic. I hope that we are being asked to pursue this honestly and sincerely, as I am attempting to do, because I have not concluded that we ought not to deploy it. But I have not concluded either that there is such a thing as a true missile defense. I know we can call it that, but will it be a defense? Will it really work the way we want it to work and how will it fit into our other defense needs and our defense requirements? Those are my questions. They are very simple.

I know that we have tried to arrange schedules to get together where I could talk to you privately and I hope we are able to do that because I do not simply want to talk about it in the public forum. I want to talk about it in every way and explore every avenue that I can.

Secretary WOLFOWITZ. Well, first of all, I would be eager to get together with you privately and talk at whatever length is useful.

Let me just, therefore, sort of summarize by saying we have no intention of deploying things that do not work.

Senator BEN NELSON. Maybe you can give me what the definition of "work" is. What does it have to do to work?

Secretary WOLFOWITZ. Let me give you an example which I think is germane. It is not with respect to defense against longer-range missiles, but we are getting ready to deploy the PAC-3 as a defense against shorter-range missiles. Up to what range, General?

General KADISH. In tens of kilometers, 20, 30 kilometers.

Senator BEN NELSON. More for the theater defense.

General KADISH. Oh, the range of the incoming. They are short-range missiles up to 600 kilometers.

Senator BEN NELSON. So, the theater defense—

Secretary WOLFOWITZ. We are getting ready to deploy finally.

Senator BEN NELSON. I really do not have a problem with that at all.

Secretary WOLFOWITZ. It does work, but it did not work 4 years ago and 5 years ago, and we are actually investing significant additional amounts in that program because it does work.

If you look at the defenses against longer-range systems, what this program represents is a certain stepping back to explore what does and does not work and to research much more aggressively things that we set aside maybe for other reasons, but I think largely because they raised ABM Treaty issues. We will try and learn from research and development which of those potentially promising technologies work and which ones do not. When we have decided which ones work, we will come up with sustainable notions of what they can do and what they cannot do.

For example, the airborne laser, which we have referred to many times in this hearing—if it works as we hope it may work, that still then leaves the issue about how much to invest in it because its geographical range is intrinsically limited.

So, we definitely are going to take this step by step and every one of those steps will be up here for thorough scrutiny and appropriation and authorization. So, the intention is certainly not to throw money at things that do not provide us real capability.

Senator BEN NELSON. Well, I would not suggest that we would or that you would advocate that either.

My time has expired. Maybe you can clarify for me what the installation—maybe during the next round of questions, you can help me understand a definition of deployment. As we work on the definition of what works and what percentage of success it has to have for us to be able to say it works, maybe you can help me understand the steps of deployment because I must admit that I would see the installation in Alaska as steps 1, 2, 3, some incremental steps, of deployment. But maybe I do not understand the word.

Secretary WOLFOWITZ. I do not know if we have time.

Senator BEN NELSON. We can do it the next round.

Chairman LEVIN. We are going to pick this up Tuesday, and that is the type of question which we are going to be focusing on, those kinds of technical questions at the Tuesday hearing.

Senator WARNER. Mr. Chairman, that is such a key question. I think we really ought to take just a minute or 2. I will yield a minute or 2 of my time.

Chairman LEVIN. It will take many more minutes to answer it, but fire away.

Senator WARNER. I think it is important. The Senator raises a key question and a lot of people want to know because I look at the Missile Defense Act of 1999, and it is clear that we are not going to do anything until it is technologically feasible. There are 97 votes behind that.

Senator BEN NELSON. Excuse me. That is what I am referring to because I am in favor of research and development to get the technology to the point where we can say it works. But I am worried that we have not defined what "works" is yet, and I certainly do not have any understanding of what deployment is when it starts. I think I will know when it is over, but I will not know when it started. That is what worries me.

Secretary WOLFOWITZ. Let me try a quick answer. If it needs correction, I will ask General Kadish to correct. If it just needs elaboration, then we will keep the elaboration until next week.

The Alaskan system is a complicated issue because what we are trying to develop there is a uniquely realistic test bed for exploring the land-based midcourse intercept system. It would be hard to improve on it I think as a way of finding out as well as possible how that kind of system would work. In fact, it will do it so well that at some point we might say, gosh, this works as well as we expected or maybe even better than we expected. If at that same time country orange—let us not be too specific—came out with a primitive ballistic missile threat to the western United States, we would say, well, we have a primitive capability to shoot down that primitive missile.

Senator BEN NELSON. So, is it part of development? Is it part of the technological development to comply with the vote, the 97 vote?

Secretary WOLFOWITZ. But that is not the capability we are aiming at. That would be sort of an emergency departure. What we would really anticipate is if we say, gosh, it works and we are not in an emergency state, we would take that information that it works, develop a real architecture that makes maximum use of that capability, and then come here with a full-fledged, long-term program for deployment of that full-up capability.

Senator BEN NELSON. It might be in the range of development at this point in time or research or something, not deployment.

Secretary WOLFOWITZ. That is the way I would consider it, Senator. But it has a little bit of dual potential.

The Joint Surveillance and Target Attack Radar System (JSTARS), which is one of the most spectacular technological developments of the last decade—it has this ability to track vehicles moving on the ground with amazing precision—was still in the development phase when the Gulf War broke out. Someone said, gee, it is just developmental, but we can use anything that might possibly work. So, we sent it to the Gulf. It turned out it worked amazingly well. We tracked the one major Iraqi attack on Khafgi. These aircraft in the air saw three large armor formations converging on one place and we were able to destroy them from the air. So, it certainly proved its worth.

People will also tell you that it set back the long-term development of the JSTARS program by some significant amount of time because it is disruptive to do that. So, you do it in an emergency. You do not do it according to a plan.

Senator BEN NELSON. Thank you.

Chairman LEVIN. Thank you, Senator Nelson.

We will now turn to Senator Warner for his remaining questions and wrap-up. Then I will do the same.

Senator WARNER. Thank you very much, Mr. Chairman.

Gentlemen, I think we have had an excellent hearing. The intensity of the debate I think is constructive. We have made a solid foundation for the Senate, indeed, I think for Congress eventually, to make a decision. It is my personal judgment that we move forward, that we had a positive sequence of exchanges today on the whole and that you move forward toward the goal of defending this country. We have a long way to go, but I commend both of you.

I am going to just ask some very basic questions here because so many people are going to look at this hearing in many parts of the United States, and some of it is a little complicated. I recognize that, and I am just going to ask some basic questions.

First, General Kadish, I am confident that our President, if not hindered by Congress, will be able to achieve a new framework with Russia. That is just my own personal conviction.

Now, on that assumption that we resolve that this new framework will enable us to go ahead with these various options which the treaty has precluded our country from doing for 30 years in its various formulations of trying to meet this threat, if we are able to go ahead, would we not then be able to get a system that is more effective and achieve it in less time?

General KADISH. I believe that to be the case, Senator.

Senator WARNER. So do I, and I have often said that, for decades, around here that that treaty has acted—well, it was designed for the purpose of not letting the United States—it was the intent of the treaty not to let us build any defenses. So, once we resolve this new framework, then we can go ahead and it will be more effective.

Now, much has been said about the suitcase bomb, and this is a chart that the Joint Chiefs have provided the committee.

[The information referred to follows:]

UNCLASSIFIED



Quite accurately, my colleague points out that the suitcase bomb sort of falls in the middle spectrum of threats. In other words, it is more likely that someone would bring a suitcase bomb than the intercontinental exchange of an accidental or a rogue firing of a missile.

But at the same time, the other axis of the chart clearly shows that the damage done by a suitcase bomb is but a small fraction

334.4 Definitions.

334.5 GMR system description.

334.6 Department and agency responsibilities.

334.7 Reporting.

AUTHORITY: National Security Act of 1947, as amended. 50 U.S.C. 404; Defense Production Act of 1950, as amended, 50 U.S.C. app. 2061 *et seq.*; E.O. 12148 of July 20, 1979, 3 CFR, 1979 Comp., p. 412; E.O. 10480 of Aug. 14, 1953, 3 CFR, 1949-53 Comp., p. 962; E.O. 12472 of Apr. 3, 1984; 3 CFR, 1984 Comp., p. 193; E.O. 12656 of Nov. 18, 1988, 53 FR 47491.

SOURCE: 55 FR 1821, Jan. 19, 1990, unless otherwise noted.

§ 334.1 Purpose.

(a) Provides policy guidance pursuant to the Defense Production Act of 1950, as amended; section 1-103 of Executive Order 12148, as amended, which includes functions continued from E.O. 11051; section 104(f) of Executive Order 12656; and part 2 of Executive Order 10480.

(b) Establishes a Graduated Mobilization Response (GMR) system for developing and implementing mobilization actions that are responsive to a wide range of national security threats and ambiguous or specific warning indicators. GMR provides for a coherent decision making process with which to proceed with specific responses to an identified crisis or emergency.

(c) Provides guidance to the Federal departments and agencies for developing plans that are responsive to a GMR system and for preparing costed option packages, as appropriate, to implement the plans.

§ 334.2 Policy.

(a) As established in Executive Order 12656, the policy of the United States is to have sufficient emergency response capabilities at all levels of government to meet essential defense and civilian needs during any national security emergency. Accordingly, each Federal department and agency shall prepare its national security emergency preparedness plans and programs to respond adequately and in a timely manner to all national security emergencies.

(b) As part of emergency response, the GMR system should be incorporated in each department's and agency's emergency preparedness plans and

programs to provide appropriate and effective response options for consideration in reacting to ambiguous and specific warnings.

(c) Departments and agencies will be provided early warning information developed by the intelligence community and policy statements of the President.

(d) Emergency resource preparedness planning is essential to ensure that the nation is adequately prepared to respond to potential national emergencies. Such emergency resource preparedness planning requires an exchange of information and planning factors among the various departments and agencies responsible for different resource preparedness activities.

(e) To carry out their emergency planning activities, civilian departments and agencies require the Department of Defense's (DOD) assessment of potential military demands that would be made on the economy in a full range of possible national security emergencies. Similarly, DOD planning should be conducted using planning regimes consistent with the policies and plans of the civilian resource departments and agencies.

(f) Under section 104(c) of Executive Order 12656, FEMA is responsible for coordinating the implementation of national emergency preparedness policy with Federal departments and agencies and with state and local governments and, therefore, is responsible for developing a system of planning procedures for integrating the emergency preparedness actions of federal, state and local governments.

(g) Federal departments and agencies shall design their preparedness measures to permit a rapid and effective transition from routine to emergency operations, and to make effective use of the period following initial indication of a probable national security emergency. This will include:

(1) Development of a system of emergency actions that defines alternatives, processes, and issues to be considered during various stages of national security emergencies; and

(2) Identification of actions that could be taken at the Federal and local levels of government in the early stages of a national security emergency or pending national security

emergency to mitigate the impact of or reduce significantly the leadtime associated with full emergency action implementation.

§ 334.3 Background.

(a) The GMR system is designed to take into account the need to mobilize the Nation's resources in response to a wide range of crisis or emergency situations. GMR is a flexible decision making process of preparedness and response actions which are appropriate to warning indicators or an event. Thus, GMR allows the government, as a whole, to take small or large, often reversible, steps to increase its national security emergency preparedness posture.

(b) Crises, especially those resulting in major military activities, always have some political or economic context. As the risks of military action increase, nations undertake more extensive preparations over a longer period of time to increase their military power. Such preparations by potential adversaries shape the nature and gravity of the threat as well as its likelihood and timing of occurrence. These measures permit the development of reliable indicators of threat at an early time in the evolution of a crisis. Depending on the nature of the situation or event and the nation involved, these early warning indicators may emanate from the political, socio-economic and/or industrial sectors.

(c) The GMR system enables the nation to approach mobilization planning and actions as part of the deterrent response capability and to use it to reduce the probability of conflict. Alternatively, if deterrence should fail, the GMR system would enable the nation to undertake a series of phased actions intended to increase its ability to meet defense and essential civilian requirements. The GMR system integrates the potential strength of the national economy into U.S. national security strategy.

§ 334.4 Definitions.

(a) *Graduated Mobilization Response (GMR)* is a system for integrating mobilization actions designed to respond to ambiguous and/or specific warnings. These actions are designed to mitigate

the impact of an event or crisis and reduce significantly the lead time associated with a full national emergency action implementation.

(b) *National security emergency* is any occurrence, including natural disaster, military attack, technological emergency, or other emergency, that seriously degrades or threatens the national security of the United States.

(c) *Mobilization* is the process of marshalling resources, both civil and military, to respond to and manage a national security emergency.

(d) *GMR Plans* are those agency documents that describe, in general, the actions that an agency could take in the early stages of a national security emergency, or upon receipt of warning information about a possible national security emergency. These actions would be designed to mitigate the impact of, or reduce significantly, the lead times associated with full emergency action implementation. Such plans are required by section 201(4)(b) of Executive Order 12656.

(e) *A Costed Option Package* is a document that describes in detail a particular action that an agency could take in the early stages of a national security emergency. The general content of a GMR costed option package includes alternative response options; the resource implications of each option; shortfalls, costs, timeframes and political feasibility.

§ 334.5 GMR system description.

The GMR system contains three stages of mobilization activity (additional intermediate GMR stages may be developed). For example, a Federal department or agency might divide "Crisis Management" into two, three, or more levels as suits its needs.

(a) *Stage 3, Planning and Preparation.* During the planning and preparation stage, Federal departments and agencies develop their GMR plans and maintain capability to carry out their mobilization-related responsibilities in accordance with section 201 of Executive Order 12656. General types of problems likely to arise in a crisis situation are identified along with possible methods for dealing with them. Investment programs can be undertaken to overcome identified problems.

(b) *Stage 2, Crisis Management.* During the crisis management stage, GMR plans are reviewed and capabilities will be re-examined in light of an actual event or crisis perceived to be emerging.

(1) Federal departments and agencies may need to gather additional data on selected resources or increase their preparedness activities. Costed Option Packages may need to be updated or new ones prepared for the response option measures in each of the department's and agency's area of responsibility. For example, when it appears likely that increased national resources may be required, resource readiness could be improved through the procurement of essential long lead time items, especially those that can be used even if the situation does not escalate. In general, long lead time preparedness actions would be considered for implementation at this time.

(2) Many preparedness actions at this stage would be handled through re-programming, but the Costed Option Packages may also require new funding.

(3) If the crisis worsens, and prior to the declaration of national emergency, it may be necessary to surge certain production and stockpile items for future use.

(c) *Stage 1, National Emergency/War.* During a national emergency or declaration of war, mobilization of all national resources escalates and GMR will be subsumed into the overall mobilization effort. As military requirements increase, the national resources would increasingly be focused on the national security emergency. This would involve diverting non-essential demand for scarce resources from peacetime to defense uses, and converting industry from commercial to military production. Both surge production and expansion of the nation's productive capacity may also be necessary. Supplemental appropriations may be required for most Federal departments and agencies having national security emergency responsibilities.

§ 334.6 Department and agency responsibilities.

(a) During Stage 3, each Federal department and agency with mobilization responsibilities will develop GMR plans as part of its emergency preparedness planning process in order to meet possible future crisis. Costed Option Packages will be developed for actions that may be necessary in the early warning period. Option packages will be reviewed, focused and refined during Stage 2 to meet the particular emergency.

(b) Each department and agency should identify response actions appropriate for the early stage of any crisis or emergency situation, which then will be reviewed, focused and refined in Stage 2 for execution, as appropriate. GMR plans should contain a menu of costed option packages that provide details of alternative measures that may be used in an emergency situation.

(c) FEMA will provide guidance pursuant to Executive Order 12656 and will coordinate GMR plans and option packages of DOD and the civilian departments and agencies to ensure consistency and to identify areas where additional planning or investment is needed.

(d) During State 2, FEMA will coordinate department and agency recommendations for action and forward them to the National Security Advisor to make certain that consistency with the overall national strategy planning is achieved.

(e) Departments and agencies will refine their GMR plans to focus on the specific crisis situation. Costed option packages should be refined to identify the resources necessary for the current crisis, action taken to obtain those resources, and GMR plans implemented consistent with the seriousness of the crisis.

(f) At Stage 1, declaration of national emergency or war, the crisis is under the control of NSC or other central authority, with GMR being integrated into partial, full or total mobilization. At this point the more traditional mechanisms of resource mobilization

are pursued, focusing on resource allocation and adjudication with cognizance of the essential civilian demand.

(g) Programs and plans developed by the departments and agencies under this guidance should be shared, as appropriate, with States, local governments and the private sector to provide a baseline for their development of supporting programs and plans.

§ 334.7 Reporting.

The Director of FEMA shall provide the President with periodic assessments of the Federal departments and agencies capabilities to respond to national security emergencies and periodic reports to the National Security Council on the implementation of the national security emergency preparedness policy. Pursuant to section 201(15) of Executive Order 12656, departments and agencies, as appropriate, shall consult and coordinate with the Director of FEMA to ensure that their activities and plans are consistent with current National Security Council guidelines and policies. An evaluation of the Federal departments and agencies participation in the graduated mobilization response program may be included in these reports.

PARTS 335-349 [RESERVED]

PART 350—REVIEW AND APPROVAL OF STATE AND LOCAL RADIOLOGICAL EMERGENCY PLANS AND PREPAREDNESS

Sec.

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AUTHORITY: 42 U.S.C. 5131, 5201, 50 U.S.C. app. 2253(g); Sec. 109 Pub. L. 96-295; Reorganization Plan No. 3 of 1978; E.O. 12127; E.O. 12148.

SOURCE: 48 FR 44335, Sept. 28, 1983, unless otherwise noted.

§ 350.1 Purpose.

The purpose of the regulation in this part is to establish policy and procedures for review and approval by the Federal Emergency Management Agency (FEMA) of State and local emergency plans and preparedness for the offsite effects of a radiological emergency which may occur at a commercial nuclear power facility. Review and approval of these plans and preparedness involves preparation of findings and determinations of the adequacy of the plans and capabilities of State and local governments to effectively implement the plans.

§ 350.2 Definitions.

As used in this part, the following terms are defined:

(a) *Director* means the Director, FEMA, or designee;

(b) *Regional Director* means a Regional Director of FEMA, or designee;

(c) *Associate Director* means the Associate Director, State and Local Programs and Support, FEMA, or designee;

(d) *FEMA* means the Federal Emergency Management Agency;

(e) *NRC* means the Nuclear Regulatory Commission;

(f) *EPZ* means Emergency Planning Zone.

(g) *Emergency Planning Zone (EPZ)* is a generic area around a commercial nuclear facility used to assist in offsite emergency planning and the development of a significant response base. For commercial nuclear power plants, EPZs of about 10 and 50 miles are delineated for the plume and ingestion exposure pathways respectively.

(h) *Plume Exposure Pathway* refers to whole body external exposure to gamma radiation from the plume and from deposited materials and inhalation exposure from the passing radioactive plume. The duration of primary

exposures could range in length from hours to days.

(i) *Ingestion Exposure Pathway* refers to exposure primarily from ingestion of water or foods such as milk and fresh vegetables that have been contaminated with radiation. The duration of primary exposure could range from hours to months.

(j) *Full participation* refers to an exercise in which: (1) State and local government emergency personnel are engaged in sufficient numbers to verify the capability to respond to the actions required by the accident scenario; (2) the integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant is tested; and (3) the implementation of the observable portions of State and/or local plans is tested.

(k) *Partial participation* refers to the engagement of State and local government emergency personnel in an exercise sufficient to adequately test direction and control functions for protective action decisionmaking related to emergency action levels and communication capabilities among affected State and local governments and the licensee.

(l) *Remedial exercise* is one that tests deficiencies of previous joint exercise that are considered significant enough to impact on the public health and safety.

(m) *Local government* refers to boroughs, cities, counties, municipalities, parishes, towns, townships and other local jurisdictions within the plume exposure pathway EPZ when any of these entities has specific roles in emergency planning and preparedness in the EPZ.

(n) *Site* refers to the location at which there is one or more commercial nuclear power plants. A nuclear power plant is synonymous with a nuclear power facility.

§ 350.3 Background.

(a) On December 7, 1979, the President directed the Director of FEMA to take the lead in State and local emergency planning and preparedness activities with respect to nuclear power facilities. This included a review of the existing emergency plans both in States with operating reactors and

those with plants scheduled for operation in the near future.

(b) This assignment was given to FEMA because of its responsibilities under Executive Order 12148 to establish Federal policies for and coordinate civil emergency planning, management and assistance functions and to represent the President in working with State and local governments and the private sector to stimulate vigorous participation in civil emergency preparedness programs. Under section 201 of the Disaster Relief Act of 1974 (42 U.S.C. 5131), and other statutory functions, the Director of FEMA is charged with the responsibility to develop and implement plans and programs of disaster preparedness.

(c) There are two sections in the NRC's fiscal year 1982/1983 Appropriation Authorization (Pub. L. 97-415) that pertain to the scope of this rule.

(1) Section 5 provides for the issuance of an operating license for a commercial nuclear power plant by the NRC if it is determined that there exists a State, local or utility plan which provides assurance that public health and safety is not endangered by the operation of the facility. This section would allow the NRC to issue an operating license for such plants without FEMA-approved State and local government plans.

(2) Section 11 provides for the issuance of temporary licenses for operating a utilization facility at a specific power level to be determined by the Commission, pending final action by the Commission on the application. Also, this section authorizes the NRC to issue temporary operating licenses for these facilities without the completion of the required (NRC) Commission hearing process. A petition for such a temporary license may not be filed until certain actions are completed including the submission of a State, local or utility emergency response plan for the facility.

(d) To carry out these responsibilities, FEMA is engaged in a cooperative effort with State and local governments and other Federal agencies in the development of State and local plans and preparedness to cope with

the offsite effects resulting from radiological emergencies at commercial nuclear power facilities. FEMA developed and published the Federal Radiological Emergency Response Plan 50 FR 46542 Nov. 8, 1985, to provide the overall support to State and local governments, for all types of radiological incidents including those occurring at nuclear power plants.

(e) FEMA has entered into a Memorandum of Understanding (MOU) with the NRC to which it will furnish assessments, findings and determinations as to whether State and local emergency plans and preparedness are adequate and continue to be capable of implementation (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualification and equipment adequacy). These findings and determinations will be used by NRC under its own rules in connection with its licensing and regulatory requirements and FEMA will support its findings in the NRC licensing process and related court proceedings.

(f) Notwithstanding the procedures set forth in these rules for requesting and reaching a FEMA administrative approval of State and local plans, findings and determinations on the current status of emergency preparedness around particular sites may be requested by the NRC and provided by FEMA for use as needed in the NRC licensing process. These findings and determinations may be based upon plans currently available to FEMA or furnished to FEMA by the NRC through the NRC/FEMA Steering Committee.

(g) An environmental assessment has been prepared on which FEMA has determined that this rule will not have a significant impact on the quality of the human environment.

[48 FR 44335, Sept. 28, 1983, as amended at 51 FR 34606, Sept. 30, 1986]

§ 350.4 Exclusions.

The regulation in this part does not apply to, nor will FEMA apply any criteria with respect to, any evaluation, assessment or determination regarding the NRC licensee's emergency plans or preparedness, nor shall FEMA make any similar determination with respect to the integration of offsite and NRC

licensee emergency preparedness except as these assessments and determinations affect the emergency preparedness of State and local governments. The regulation in this part applies only to State and local planning and preparedness with respect to emergencies at commercial nuclear power facilities and does not apply to other facilities which may be licensed by NRC, nor to United States Government-owned, non-licensed facilities nor the jurisdictions surrounding them.

§ 350.5 Criteria for review and approval of State and local radiological emergency plans and preparedness.

(a) Section 50.47 of NRC's Emergency Planning Rule (10 CFR parts 50 (appendix E) and 70 as amended) and the joint FEMA-NRC *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants* (NUREG-0654/FEMA-REP-1, Rev. 1, November 1980) which apply insofar as FEMA is concerned to State and local governments, are to be used in reviewing, evaluating and approving State and local radiological emergency plans and preparedness and in making any findings and determinations with respect to the adequacy of the plans and the capabilities of State and local governments to implement them. Both the planning and preparedness standards and related criteria contained in NUREG-0654/ FEMA-REP-1, Rev. 1 are to be used by FEMA and the NRC in reviewing and evaluating State and local government radiological emergency plans and preparedness. For brevity, only the planning standards contained in NUREG-0654/ FEMA-REP-1, Rev. 1 are presented below.

(1) Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established and each principal response organization has staff to respond to and augment its initial response on a continuous basis.

(2) On-shift facility licensee responsibilities for emergency response are

unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified. (This standard applies only to NRC licensees but is included here for completeness.)

(3) Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made and other organizations capable of augmenting the planned response have been identified.

(4) A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

(5) Procedures have been established for notification, by the licensee, of State and local response organizations and for the notification of emergency personnel by all response organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

(6) Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

(7) Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance and procedures

for coordinated dissemination of information to the public are established.

(8) Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

(9) Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

(10) A range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

(11) Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

(12) Arrangements are made for medical services for contaminated injured individuals.

(13) General plans for recovery and reentry are developed.

(14) Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities. periodic drills are (will be) conducted to develop and maintain key skills and deficiencies identified as a result of exercises or drills are (will be) corrected.

(15) Radiological emergency response training is provided to those who may be called upon to assist in an emergency.

(16) Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

(b) In order for State of local plans and preparedness to be approved, such plans and preparedness must be determined to adequately protect the public health and safety by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency.

\$ 350.6 Assistance in development of State and local plans.

(a) An integrated approach to the development of offsite radiological emergency plans by States, localities and the licensees of NRC with the assistance of the Federal Government is the approach most likely to provide the best protection to the public. Hence, Federal agencies, including FEMA Regional staff, will be made available upon request to assist States and localities in the development of plans.

(b) There now exists in each of the ten standard Federal Regions a Regional Assistance Committee (RAC) (formerly the Regional Advisory Committee) chaired by a FEMA Regional official and having members from the Nuclear Regulatory Commission, Department of Health and Human Services, Department of Energy, Department of Transportation, Environmental Protection Agency, the United States Department of Agriculture and Department of Commerce. Whereas in 44 CFR part 351, the Department of Defense is listed as a potential member of the RACs, it is not listed in this rule because military nuclear facilities are not the subject of concern. The RACs will assist State and local government officials in the development of their radiological emergency response plans, and will review plans and observe exercises to evaluate the adequacy of these plans and related preparedness. This assistance does not include the actual writing of State and local government plans by RAC members.

(c) In accomplishing the foregoing, the RACs will use the standards and criteria in NUREG-0654/FEMA-REP-1, Rev. 1, and will render such technical assistance as may be required, appropriate to their agency mission and expertise. In observing and evaluating exercises, the RACs will identify, soon after an exercise, any deficiencies observed in the planning and preparedness effort including deficiencies in resources, training of staff, equipment, staffing levels and deficiencies in the qualifications of personnel.

\$ 350.7 Application by State for review and approval.

(a) A State which seeks formal review and approval by FEMA of the

State's radiological emergency plan shall submit an application for such review and approval to the FEMA Regional Director of the Region in which the State is located. The application, in the form of a letter from the Governor or from such other State official as the Governor may designate, shall contain one copy of the completed State plan, including coverage of response in the ingestion exposure pathway EPZ. The application will also include plans of all appropriate local governments. The application shall specify the site or sites for which plan approval is sought. For guidance on the local government plans that should be included with an application, refer to Part I.E. NUREG-0654/FEMA-REP-1, Rev. 1, entitled Contiguous Jurisdiction Governmental Emergency Planning (see (e)). Only a State may request formal review of State or local radiological emergency plans.

(b) Generally, the plume exposure pathway EPZ for nuclear power facilities shall consist of an area about 10 miles (16 Km) in radius and the ingestion exposure pathway EPZ shall consist of an area about 50 miles (80 Km) in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power facility shall be determined by State and local governments in consultation with FEMA and NRC taking into account such local conditions as demography, topography, land characteristics, access routes and local jurisdiction boundaries. The size of the EPZs may be determined by NRC in consultation with FEMA on a case-by-case basis for gas cooled reactors and for reactors with an authorized power level less than 250 Mw thermal. The plans for the ingestion exposure pathway shall focus on such actions as are appropriate to protect the public from ingesting contaminated food and water.

(c) A State may submit separately its plans for the EPZs and the local government plans related to individual nuclear power facilities. The purpose of separate submissions is to allow approval of a State plan, and of the plans necessary for specific nuclear power facilities in a multiple-facility State, while not approving or acting on the plans necessary for other nuclear

power facilities within the State. If separate submissions are made, appropriate adjustments in the State plan may be necessary. In any event, FEMA approval of State plans and appropriate local government plans shall be site specific.

(d) The applications shall contain a statement that the State plan, together with the appropriate local plans, is, in the opinion of the State, adequate to protect the public health and safety of its citizens living within the emergency planning zones for the nuclear power facilities included in the submission by providing reasonable assurance that State and local governments can and intend to effect appropriate protective measures offsite in the event of a radiological emergency.

(e) FEMA and the States will make suitable arrangements in the case of overlapping or adjacent jurisdictions to permit an orderly assessment and approval of interstate or interregional plans.

§ 350.8 Initial FEMA action on State plan.

(a) The Regional Director shall acknowledge in writing within ten days the receipt of the State application.

(b) FEMA shall publish a notice signed by the Regional Director or designee in the FEDERAL REGISTER within 30 days after receipt of the application, that an application from a State has been received and that copies are available at the Regional Office for review and copying in accordance with 44 CFR 5.26.

(c) The Regional Director shall furnish copies of the plan to members of the RAC for their analysis and evaluation.

(d) The Regional Director shall make a detailed review of the State plan, including those of local governments, and assess the capability of State and local governments to effectively implement the plan (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualification and equipment adequacy). Evaluation and comments of the RAC members will be used as part of the review process.

(e) In connection with the review, the Regional Director may make sugges-

tions to States concerning perceived gaps or deficiencies in the plans, and the State may amend the plan at any time prior to forwarding to the Associate Director of FEMA.

(f) Two conditions for FEMA approval of State plans (including local government plans) are the requirements for an exercise (see § 350.9), and for public participation (see §§ 350.9 and 350.10.). These activities occur during the Regional review and prior to the forwarding of the plan to the Associate Director.

§ 350.9 Exercises.

(a) Before a Regional Director can forward a State plan to the Associate Director for approval, the State, together with all appropriate local governments, must conduct a joint exercise of that State plan, involving full participation¹ of appropriate local government entities, the State and the appropriate licensee of the NRC. To the extent achievable, this exercise shall include participation by appropriate Federal agencies. This exercise shall be observed and evaluated by FEMA and by representatives of other Federal agencies with membership on the RACs and by NRC with respect to licensee response. Within 48 hours of the completion of the exercise, a briefing involving the exercise participants and Federal observers shall be conducted by the Regional Director to discuss the preliminary results of the exercise. If the exercise discloses any deficiencies in the State and local plans, or the ability of the State and local governments to implement the plans, the FEMA representatives shall make them known promptly in writing to appropriate State officials. To the extent necessary, the State shall amend the plan to incorporate recommended changes or improvements or take other corrective measures, such as remedial exercises,¹ to demonstrate to the Regional Director that identified weaknesses have been corrected.

(b) The Regional Director shall be the FEMA official responsible for certifying to the Associate Director that an

¹ See § 350.2 for definitions of "full participation" and "remedial exercises".

exercise of the State plan has been conducted, and that changes and corrective measures in accordance with paragraph (a) of this section have been made.

(c) State and local governments that have fully participated in a joint exercise within one year prior to the effective date of this final rule will have continuing approval of their radiological emergency plans and preparedness by following the frequency indicated in paragraphs (c) (1) through (4) of this section. State and local governments that have not fully participated in a joint exercise within one year prior to the effective date of this final rule will follow the frequency indicated in paragraphs (c) (1) through (4) of this section after completion of a joint exercise in which they have fully participated. If, in developing exercise schedules with State and local governments to implement the requirements in paragraphs (c) (1) through (4) of this section, the Regional Director finds that unusual hardships would result, he may seek relief from the Associate Director.

(1) Each State which has a commercial nuclear power site within its boundaries or is within the 10-mile plume exposure pathway Emergency Planning Zone of such site shall fully participate in an exercise jointly with the nuclear power plant licensee and appropriate local governments at least every two years.

(2) Each State with multiple sites within its boundaries shall fully participate in a joint exercise at some site on a rotational basis at least every 2 years. When not fully participating in an exercise at a site, the State shall partially participate² at that site to support the full participation of appropriate local governments. Priority shall be given to new facilities seeking an operating license from the NRC and which have not fully participated in a joint exercise involving the State, local governments and the licensee at that site. State and local governments will coordinate the scheduling of these exercises with the appropriate FEMA

and NRC Regional Offices and the affected licensees.

(3) Each appropriate local government which has a site within its boundaries or is within the 10-mile emergency planning zone shall fully participate in a joint exercise with the licensee and the State at least every two years. For those local governments that have planning and preparedness responsibilities for more than one facility, the Regional Director may seek an exemption from this requirement by recommending alternative arrangements for approval by the Associate Director.

(4) States within the 50-mile emergency planning zone of a site shall exercise their plans and preparedness related to ingestion exposure pathway measures at least once every five years in conjunction with a plume exposure pathway exercise for that site.

(5) Remedial exercises may be required to correct deficiencies observed in exercises conducted for continued FEMA approval. Should this occur, the FEMA Regional Director will determine the participation required from the States and/or local governments.

(d) Within 48 hours of the completion of an exercise conducted for continued FEMA approval, a briefing involving the exercise participants and Federal observers shall be conducted by the Regional Director to discuss the preliminary results of the exercise. If the exercise discloses any deficiencies in the State and local plans, or the ability of the State and local governments to implement the plans, the FEMA representatives shall make them known promptly in writing to appropriate State officials. To the extent necessary, the State shall amend the plan to incorporate recommended changes or improvements or take other corrective measures, such as remedial exercises, to demonstrate to the Regional Director that identified weaknesses have been corrected. The Regional Director shall forward his or her evaluation of the exercise conducted for continued FEMA approval to the Associate Director including the certification that changes and corrective measures have been made.

²See § 350.2 for definition of "partial exercise".

(e) Following the exercise conducted for continued FEMA approval, the Regional Director shall conduct a meeting in the vicinity of the nuclear power facility which will include the exercise participants, representatives from the NRC and other appropriate Federal agencies and the public and media as observers. The purpose of this meeting is to discuss the evaluation of the exercise. At the discretion of the Regional Director, written comments from the public and media may be submitted at or after the meeting. These comments will be taken into consideration by the Regional Director in his or her evaluation.

(f) After FEMA approval of a State and local plan has been granted, failure to exercise the State and local plans at the frequency and participation described in this section shall be grounds for withdrawing FEMA approval. (See § 350.13.)

§ 350.10 Public meeting in advance of FEMA approval.

(a) During the FEMA Regional Office review of a State plan and prior to the submission by the Regional Director of the evaluation of the plan and exercise to the Associate Director, the FEMA Regional Director shall assure that there is at least one public meeting conducted in the vicinity of the nuclear power facility. The purpose of such a meeting, which may be conducted by the State or by the Regional Director, shall be to:

(1) Acquaint the members of the public in the vicinity of each facility with the content of the State and related local plans, and with the conduct of the joint exercise which tested the plans;

(2) Answer any questions about FEMA review of the plan and the exercise;

(3) Receive suggestions from the public concerning improvements or changes that may be necessary; and

(4) Describe to the public the way in which the plan is expected to function in the event of an actual emergency.

(b) The Regional Director should assure that representatives from appropriate State and local government agencies, and the affected utility appear at such meetings to make presentations and to answer questions from

the public. The public meeting should be held after the first joint (utility, State and local governments) exercise at a time mutually agreed to by State and local authorities, licensee and FEMA and NRC Regional officials. This meeting shall be noticed in the local newspaper with the largest circulation in the area, or other such media as the Regional Director may select, on at least two occasions, one of which is at least two weeks before the meeting takes place and the other is within a few days of the meeting date. Local radio and television stations should be notified of the scheduled meeting at least one week in advance. Representatives from NRC and other appropriate Federal agencies should also be invited to participate in these meetings. If, in the judgment of the FEMA Regional Director, the public meeting or meetings reveal deficiencies in the State plan and/or the joint exercise, the Regional Director shall inform the State of the fact together with recommendations for improvement. No FEMA approval of State and local plans and preparedness shall be made until a meeting described in this paragraph shall have been held at or near the nuclear power facility site for which the State is seeking approval.

§ 350.11 Action by FEMA Regional Director.

(a) Upon completion of his or her review, including conduct of the exercise required by § 350.9 and after the public meeting required by § 350.10, the Regional Director shall prepare an evaluation of the State plan, including plans for local governments. Such evaluation shall be specific with respect to the plans applicable to each nuclear facility so that findings and determinations can be made by the Associate Director on a site-specific basis.

(b) The Regional Director shall evaluate the adequacy of State and local plans and preparedness on the basis of the criteria set forth in § 350.5, and shall report the evaluation with respect to each of the planning standards mentioned therein as such apply to State and local plans and preparedness.

(c) The Regional Director shall forward the State plan together with his or her evaluation and other relevant

record material to the Associate Director. Relevant record material will include the results of the exercise (i.e., deficiencies noted and corrections made), a summary of the deficiencies identified during the public meeting, recommendations made to the State and commitments made by the State for effecting improvements in its plans and preparedness and actions taken by the State.

§ 350.12 FEMA Headquarters review and approval.

(a) Upon receipt from a Regional Director of a State plan, the Associate Director shall conduct such review of the State plan as he or she shall deem necessary. The Associate Director shall arrange for copies of the plan, together with the Regional Director's evaluation, to be made available to the members of the Federal Radiological Preparedness Coordinating Committee (FRPCC) and to other offices of FEMA with appropriate guidance relative to any assistance that may be needed in the FEMA review and approval process.

(b) If, after formal submission of the State plan and the Regional Director's evaluation, the Associate Director determines that the State plans and preparedness:

(1) Are adequate to protect the health and safety of the public living in the vicinity of the nuclear power facility by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency; and

(2) Are capable of being implemented (e.g. adequacy and maintenance of procedures, training, resources, staffing levels and qualification and equipment adequacy); the Associate Director shall approve in writing the State plan. The Associate Director shall concurrently communicate this FEMA approval to the Governor of the State(s) in question, the NRC and the pertinent Regional Director(s) and immediately shall publish in the FEDERAL REGISTER a notice of this effect.

(c) If, after formal submission of the State plan, the Associate Director is not satisfied with the adequacy of the plan or preparedness with respect to a particular site, he or she shall concurrently communicate that decision to

the Governor(s) of the State(s), the NRC and the pertinent Regional Director(s), together with a statement in writing explaining the reasons for the decision and requesting appropriate plan or preparedness revision. Such statement shall be transmitted to the Governor(s) through the appropriate Regional Director(s). The Associate Director shall immediately publish a notice to this effect in the FEDERAL REGISTER.

(d) The approval shall be of the State plan together with the local plans for each nuclear power facility (including out-of-State facilities) for which approval has been requested. FEMA may withhold approval of plans applicable to a specific nuclear power facility in a multi-facility State, but nevertheless approve the State plan and associated local plans applicable to other facilities in a State. Approval may be withheld for a specific site until plans for all jurisdictions within the emergency planning zones of that site have been reviewed and found adequate.

(e) Within 30 days after the date of notification of approval for a particular nuclear power facility or within 30 days of any statement of disapproval of a State plan, any interested person may appeal the decision of the Associate Director to the Director; however, such an appeal must be made solely upon the ground that the Associate Director's decision, based on the available record, was unsupported by substantial evidence. (See § 350.15 for appeal procedures.)

§ 350.13 Withdrawal of approval.

(a) If, at any time after granting approval of a State plan, the Associate Director determines, on his or her own initiative, motion or on the basis of information another person supplied, that the State or local plan is no longer adequate to protect public health and safety by providing reasonable assurance that appropriate protective measures can be taken, or is no longer capable of being implemented, he or she shall immediately advise the Governor of the affected State, through the appropriate Regional Director and the NRC of that initial determination

in writing. FEMA shall spell out in detail the reasons for its initial determination, and shall describe the deficiencies in the plan or the preparedness of the State. If, after four months from the date of such an initial determination, the State in question has not either:

(1) Corrected the deficiencies noted, or (2) submitted an acceptable plan for correcting those deficiencies, the Associate Director shall withdraw approval and shall immediately inform the NRC and the Governor of the affected State, of the determination to withdraw approval and shall publish in the FEDERAL REGISTER and the local newspaper having the largest daily circulation in the affected State notice of its withdrawal or approval. The basis upon which the Associate Director makes the determination for withdrawal of approval is the same basis used for reviewing plans and exercises, i.e., the planning standards and related criteria in NUREG0654/FEMA/REP-1, Rev. 1.

(b) In the event that the State in question shall submit a plan for correcting the deficiencies, the Associate Director shall negotiate a schedule and a timetable under which the State shall correct the deficiencies. If, on the agreed upon date, the deficiencies have been corrected, the Associate Director shall withdraw the initial determination and the approval previously granted shall remain valid. He or she shall inform the Governor(s), the NRC, the pertinent Regional Director(s) and notify the public as stated in paragraph (a) of this section. If, however, on the agreed upon date, the deficiencies are not corrected, FEMA shall withdraw its approval and shall communicate its decision to the Governor of the State whose plan is in question, the NRC, the appropriate Federal agencies and notify the public as indicated above.

(c) Within 30 days after the date of notification of withdrawal of approval of a State or local plan, any interested person may appeal the decision of the Associate Director to the Director; however, such an appeal must be made solely upon the ground that the Associate Director's decision, based on the available record, was unsupported by substantial evidence. (See § 350.15 for appeal procedures.)

§ 350.14 Amendments to State plans.

(a) The State may amend a plan submitted to FEMA for review and approval under § 350.7 at any time during the review process or may amend a plan at any time after FEMA approval has been granted under § 350.12. A State must amend its plan in order to extend the coverage of the plan to any new nuclear power facility which becomes operational after a FEMA approval or in case of any other significant change. The State plan shall remain in effect as approved while any significant change is under review.

(b) A significant change is one which involves the evaluation and assessment of a planning standard or which involves a matter which, if presented with the plan, would need to have been considered by the Associate Director in making a decision that State or local plans and preparedness are:

(1) Adequate to protect the health and safety of the public living in the vicinity of the nuclear power facility by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency; and

(2) Capable of being implemented.

(c) A significant change will be processed in the same manner as if it were an initial plan submission. However, the Regional Director may determine that certain procedures, such as holding a public meeting or a complete exercise, would be unnecessary. The existing FEMA approval shall remain in effect while any significant changes are under review.

(d) Changes, such as a change in a telephone number, that are not significant as defined in paragraphs (b) and (c) of this section, but are necessary to maintain currency of the plan, should be forwarded to the Regional Director.

§ 350.15 Appeal procedures.

(a) Any interested person may appeal a decision made under §§ 350.12 and 350.13 of this part, by submitting to the Director, FEMA, a written notice of appeal, within 30 days after the appearance in the FEDERAL REGISTER, of the notice of decision relating to the matter being appealed. The appeal must be addressed to the Director, Federal Emergency Management Agency, 500 C

Street, SW., Washington, DC, 20472. The appeal letter shall state specific reasons for the appeal and include an offer to provide documentation supporting appellate arguments.

(b) Upon receipt of an appeal, the Director or the Director's designee shall review the file, as submitted to the Associate Director, State and Local Programs and Support, by the Regional Director of the FEMA Region concerned, based on the information contained in the file and the appeal letter, with supporting documentation. The Director or the Director's designee shall decide whether or not the Associate Director's initial decision was supported by substantial evidence in the file and is consistent with FEMA policy.

(c) The decision of the Director or the Director's designee shall be published in the FEDERAL REGISTER as the final agency decision on the matter and shall not be reviewable within FEMA, except upon a showing that it was procured by fraud or misrepresentation. In addition to publication in the FEDERAL REGISTER, copies of the decision shall be forwarded to the appellant, the Governor(s) of the State(s) affected, the NRC and the affected licensee of the involved power facility.

PART 351—RADIOLOGICAL EMERGENCY PLANNING AND PREPAREDNESS

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AUTHORITY: 5 U.S.C. 552, Reorganization Plan No. 3 of 1978, E.O. 12127, E.O. 12148, E.O. 12241; Presidential Directive of Dec. 7, 1979.

SOURCE: 47 FR 10759, Mar. 11, 1982, unless otherwise noted.

Subpart A—General

§ 351.1 Purpose.

This part sets out Federal agency roles and assigns tasks regarding Federal assistance to State and local governments in their radiological emergency planning and preparedness activities. Assignments in this part are applicable to radiological accidents at fixed nuclear facilities and transportation accidents involving radioactive materials.

§ 351.2 Scope.

The emergency planning and preparedness responsibilities covered by this part relate to consequences and activities which extend beyond the boundaries of any fixed nuclear facility with a potential for serious consequences and the area affected by a transportation accident involving radioactive materials.

§ 351.3 Limitation of scope.

(a) This part covers Federal agency assignments and responsibilities in connection with State and local emergency plans and preparedness measures. It does not set forth criteria used in the review and approval of these plans and does not include any of the requirements associated with FEMA findings and determinations on the adequacy of State and local government radiological emergency preparedness. FEMA has published a separate rule on procedures and criteria for reviewing and approving these plans and preparedness capabilities. Furthermore, this part does not set forth Federal agency responsibilities or capabilities for *responding to an accident* at a fixed nuclear facility or a transportation accident involving radioactive materials. These responsibilities are addressed in the "Federal Radiological

Emergency Response Plan" (50 FR 46542, November 8, 1985).

(b) Nothing in this part authorizes access to or disclosure of classified information required to be protected in accordance with Federal law or regulation in the interest of national security.

[47 FR 10759, Mar. 11, 1982, as amended at 51 FR 34606, Sept. 30, 1986]

Subpart B—Federal Radiological Preparedness Coordinating Committee and Regional Assistance Committees

§ 351.10 Establishment of committees.

(a) The Federal Radiological Preparedness Coordinating Committee (FRPCC) consists of the Federal Emergency Management Agency, which chairs the Committee, Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Energy, Department of Transportation, Department of Defense, United States Department of Agriculture, Department of Commerce and, where appropriate and on an ad hoc basis, other Federal departments and agencies. In chairing the committee, FEMA will be responsible for assuring that all agency assignments described in this rule are coordinated through the Committee and carried out with or on behalf of State and local governments.

(b) The Regional Assistance Committees (RACs), one in each of 10 standard Federal regions,¹ consist of a FEMA Regional Representative who chairs the Committee and representatives from the Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Energy, Department of Transportation, United States Department of Agriculture, Department of Commerce and other Federal departments and agencies such as the Department of Defense, as appropriate. The FEMA Chairperson of the

RACs will provide guidance and orientation to other agency members to assist them in carrying out their functions.

§ 351.11 Functions of committees.

(a) The FRPCC shall assist FEMA in providing policy direction for the program of Federal assistance to State and local governments in their radiological emergency planning and preparedness activities. The FRPCC will establish subcommittees to aid in carrying out its functions; e.g., research, training, emergency instrumentation, transportation, information, education and Federal response. The FRPCC will assist FEMA in resolving issues relating to granting of final FEMA approval of a State plan. The FRPCC will coordinate research and study efforts of its member agencies related to State and local government radiological emergency preparedness to assure minimum duplication and maximum benefits to State and local governments. The FRPCC will also assure that the research efforts of its member agencies are coordinated with the Interagency Radiation Research Committee.

(b) The RACs will assist State and local government officials in the development of their radiological emergency plans and will review these plans and observe exercises to evaluate adequacy of the plans. Each Federal agency member of the RACs will support the functions of these committees by becoming knowledgeable of Federal planning and guidance related to State and local radiological emergency plans, of their counterpart State organizations and personnel, where their agency can assist in improving the preparedness and by participating in RAC meetings.

Subpart C—Interagency Assignments

§ 351.20 The Federal Emergency Management Agency.

(a) Establish policy and provide leadership via the FRPCC in the coordination of all Federal assistance and guidance to State and local governments for developing, reviewing, assessing and testing the State and local radiological emergency plans.

¹ I (Boston); II (New York); III (Philadelphia); IV (Atlanta); V (Chicago); VI (Dallas); VII (Kansas City); VIII (Denver); IX (San Francisco) and X (Seattle).

(b) Issue guidance in cooperation with other Federal agencies concerning their responsibilities for providing radiological emergency planning and preparedness assistance to State and local governments.

(c) Foster cooperation of industry, technical societies, Federal agencies and other constituencies in the radiological emergency planning and preparedness of State and local governments.

(d) Develop and promulgate preparedness criteria and guidance to State and local governments, in coordination with other Federal agencies, for the preparation, review and testing of State and local radiological emergency plans.

(e) Provide assistance to State and local governments in the preparation, review and testing of radiological emergency plans.

(f) Assess, with the assistance of other Federal agencies, the adequacy of State and local government emergency plans and the capability of the State and local government officials to implement them (e.g., adequacy and maintenance of equipment, procedures, training, resources, staffing levels and qualifications) and report the findings and determinations to NRC.

(g) Review and approve State radiological emergency plans and preparedness in accordance with FEMA procedures in 44 CFR part 350.

(h) Develop, implement and maintain a program of public education and information to support State and local radiological emergency plans and preparedness.

(i) Develop and manage a radiological emergency response training program to meet State and local needs, using technical expertise and resources of other involved agencies. Develop and field test exercise materials and coordinate the Federal assistance required by States and localities in conducting exercises, including guidance for Federal observers.

(j) Develop, with NRC and other Federal Agencies, representative scenarios from which NRC licensed facility operators and State and local governments may select for use in testing and exercising radiological emergency plans.

(k) Issue guidance for establishment of State and local emergency instrumentation systems for radiation detection and measurement.

(l) Provide guidance and assistance, in coordination with NRC and HHS, to State and local governments concerning the storage and distribution of radioprotective substances and prophylactic use of drugs (e.g., potassium iodide) to reduce the radiation dose to specific organs as a result of radiological emergencies.

§ 351.21 The Nuclear Regulatory Commission.

(a) Assess NRC nuclear facility (e.g., commercial power plants, fuel processing centers and research reactors) licensee emergency plans for adequacy to protect the health and safety of the public.

(b) Verify that nuclear facility licensee emergency plans can be adequately implemented (e.g., adequacy and maintenance of equipment, procedures, training, resources, staffing levels and qualifications).

(c) Review FEMA's findings and determinations of State and local radiological emergency plans for areas surrounding NRC licensed nuclear facilities.

(d) Take into account the overall state of emergency preparedness in making decisions to issue operating licenses or shut down licensed operating reactors, including the integration of assessments of emergency preparedness onsite by the NRC and offsite by FEMA.

(e) Where not already established, determine, in cooperation with other Federal agencies, the appropriate planning bases for NRC licensed nuclear facilities including distances, times and radiological characteristics.

(f) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(g) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and evaluating the plans and preparedness.

(h) Assist FEMA and DOT in the preparation and promulgation of guidance to State and local governments for their use in developing the transportation portions of radiological emergency plans.

(i) Provide representation to and support for the FRPCC and the RACs.

(j) Assist FEMA in the development, implementation and maintenance of public information and education programs.

(k) Assist FEMA with other Federal agencies in the development of representative scenarios from which nuclear facility operators and State and local governments may select for use in testing and exercising radiological emergency plans.

(l) Assist FEMA in the development of guidance for State and local governments on emergency instrumentation systems for radiation detection and measurement.

(m) Assist FEMA with the development, implementation and presentation to the extent that resources permit of training programs for Federal, State and local radiological emergency preparedness personnel.

(n) Assist FEMA in providing guidance and assistance to State and local governments concerning the storage and distribution of radioprotective substances and prophylactic use of drugs (e.g., potassium iodide) to reduce the radiation dose to specific organs as a result of radiological emergencies.

§ 351.22 The Environmental Protection Agency.

(a) Establish Protective Action Guides (PAGs) for all aspects of radiological emergency planning in coordination with appropriate Federal agencies.

(b) Prepare guidance for State and local governments on implementing PAGs, including recommendations on protective actions which can be taken to mitigate the potential radiation dose to the population. This guidance will be presented in the Environmental Protection Agency (EPA) "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents." (The preparation of PAGs related to human food and animal feed will be done in coordination with the Depart-

ment of Health and Human Services (HHS)/Food and Drug Administration.)

(c) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(d) Assist FEMA with the development, implementation and presentation to the extent that resources permit of technical training for State and local officials regarding PAGs and protective actions, radiation dose assessment and decisionmaking.

(e) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and evaluating the plans and preparedness.

(f) Assist FEMA in the development of guidance for State and local governments on emergency instrumentation systems for radiation detection and measurement.

(g) Provide representation to and support for the FRPCC and the RACs.

(h) Assist FEMA in developing representative scenarios from which nuclear facility operators and State and local governments may select for use in testing and exercising radiological emergency plans.

(i) Assist FEMA in the development, implementation and maintenance of public information and education programs.

§ 351.23 The Department of Health and Human Services.

(a) Develop and specify protective actions and associated guidance to State and local governments for human food and animal feed (in cooperation with the Environmental Protection Agency).

(b) Provide guidance and assistance to State and local governments in preparing programs related to mental health, behavioral disturbances and epidemiology associated with radiological emergencies.

(c) Assist FEMA in the development, implementation and maintenance of public information and education programs to support State and local government radiological emergency plans and preparedness.

(d) Assist FEMA with the development, implementation and presentation to the extent that resources permit of a radiological emergency training program to support State and local government personnel in accident assessment, protective actions and decisionmaking.

(e) Develop and assist in providing the requisite training programs for State and local health, mental health and social service agencies.

(f) Provide guidance to State and local governments on the use of radio-protective substances and prophylactic use of drugs (e.g., potassium iodide) to reduce the radiation dose to specific organs including dosage and projected radiation exposures at which such drugs should be used.

(g) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(h) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and evaluating the plans and preparedness.

(i) Provide representation to and support for the FRPCC and the RACs.

(j) Assist FEMA in developing representative scenarios from which nuclear facility operators and State and local governments may select for use in testing and exercising radiological emergency plans.

(k) Assist FEMA in the development of guidance for State and local governments on emergency instrumentation systems for radiation detection and measurement.

(l) Assist, in cooperation with the United States Department of Agriculture (USDA), the State and local governments in the planning for the safe production, during radiological emergencies, of human food and animal feed in the emergency planning zones around fixed nuclear facilities.

(m) Assist FEMA, through the Interagency Radiation Research Committee, chaired by the Department of Health and Human Services, in the coordination of Federal research efforts, primarily in areas related to the bio-effects of radiation, applicable to State and local plans and preparedness.

§ 351.24 The Department of Energy.

(a) Determine the appropriate planning bases for the Department of Energy (DOE) owned and contractor operated nuclear facilities (e.g., research and weapon production facilities) including distances, time and radiological characteristics.

(b) Assess DOE nuclear facility emergency plans for adequacy in contributing to the health and safety of the public.

(c) Verify that DOE nuclear facility emergency plans can be adequately implemented (e.g., adequacy and maintenance of equipment, procedures, training, resources, staffing levels and qualifications).

(d) Assist State and local governments, within the constraints of national security and in coordination with FEMA, in the preparation of those portions of their radiological emergency plans related to DOE owned and contractor operated nuclear facilities and radioactive materials in transit.

(e) Review and assess FEMA's findings and determinations on the adequacy of and capability to implement State and local radiological emergency plans for areas surrounding DOE nuclear facilities. Make independent assessments of the overall State of plans and preparedness.

(f) Serve as the lead agency for coordinating the development and issuance of interagency instructions and guidance to implement the Federal Radiological Monitoring and Assessment Plan (FRMAP), which will replace the Interagency Radiological Assistance Plan. The FRMAP provides the framework through which participating Federal agencies will coordinate their emergency radiological monitoring and assessment activities with those of State and local governments.

(g) Develop, maintain and improve capability to detect and assess hazardous levels of radiation.

(h) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(i) Assist FEMA with the development, implementation and presentation to the extent that resources permit of training programs for Federal,

State and local radiological emergency response personnel.

(j) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and evaluating the plans and preparedness.

(k) Develop, with FEMA, representative scenarios from which DOE facility operators and State and local governments may select for use in testing and exercising radiological emergency plans.

(l) Provide representation to and support for the FRPCC and the RACs.

(m) Assist FEMA in the development of guidance for State and local governments on emergency instrumentation systems for radiation detection and measurement.

§ 351.25 The Department of Transportation.

(a) Assist FEMA, along with NRC, in the preparation and promulgation of guidance to State and local governments for their use in developing the transportation portions of radiological emergency plans.

(b) Assist FEMA in its review and approval of State and local radiological emergency plans and in the evaluation of exercises to test such plans.

(c) Provide guidance and materials for use in training emergency services and other response personnel for transportation accidents involving radioactive materials and participate in interagency planning for such training.

(d) Provide representation to and support for the FRPCC and the RACs.

§ 351.26 The United States Department of Agriculture.

(a) Assist FEMA in developing and promulgating guidance to State and local governments for the preparation of radiological emergency plans.

(b) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and reviewing and evaluating the plans and preparedness.

(c) Assist State and local governments in preparing to implement protective actions in food ingestion path-

way emergency planning zones around fixed nuclear facilities.

(d) Develop, in coordination with FEMA, the HHS and other Federal agencies, guidance for assisting State and local governments in the production, processing and distribution of food resources under radiological emergency conditions.

(e) Assist FEMA with the development, implementation and presentation to the extent that resources permit of training programs of Federal, State and local radiological emergency personnel.

(f) Provide representation to and support for the FRPCC and the RACs.

§ 351.27 The Department of Defense.

(a) Determine appropriate planning bases for Department of Defense (DOD) nuclear facilities and installations (e.g., missile bases, nuclear submarine facilities and weapon storage sites) including distances, time and radiological characteristics.

(b) Develop, with FEMA, representative scenarios from which DOD nuclear facility commanders and State and local governments may select for use in testing and exercising radiological emergency plans.

(c) Assist State and local governments, within the constraints of national security and in coordination with FEMA, in the development, review and assessment of those portions of their radiological emergency plans related to DOD nuclear facilities and assist State officials with planning for response to accidents involving DOD controlled radioactive materials in transit.

(d) Provide representation to and support for the FRPCC and the RACs when appropriate.

§ 351.28 The Department of Commerce.

(a) Assist State and local governments in determining their requirements for meteorological and hydrological services for radiological emergencies and assist State and local governments in preparing to meet these requirements within the limits of available resources.

(b) Assist FEMA in developing and promulgating guidance to State and

local governments for the preparation of radiological emergency plans.

(c) Participate with FEMA in assisting State and local governments in developing their radiological emergency plans, evaluating exercises to test plans and evaluating the plans and preparedness.

(d) Assist FEMA with the development, implementation and presentation to the extent that resources permit of technical training for State and local officials in the use of meteorological information in responding to radiological emergencies.

(e) Provide representation to and support for the FRPCC and the RACs.

(f) Assist FEMA in the development of guidance for State and local governments on the exposure and location of emergency instrumentation systems for radiation detection and measurement.

(g) The Federal Coordinator for Meteorological Services and Supporting Research will, consistent with the provisions of the Office of Management and Budget Circular A-62, serve as the coordinating agent for any multi-agency meteorological aspects of assisting State and local governments in their radiological emergency planning and preparedness.

PART 352—COMMERCIAL NUCLEAR POWER PLANTS: EMERGENCY PREPAREDNESS PLANNING

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AUTHORITY: Federal Civil Defense Act of 1950, as amended (50 U.S.C. app. 2251 *et seq.*); Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 *et seq.*; 31 U.S.C. 9701; Executive Order 12657; Executive Order 12148; Executive Order 12127 and Executive Order 12241.

SOURCE: 54 FR 31925, Aug. 2, 1989, unless otherwise noted.

§ 352.1 Definitions.

As used in this part, the following terms and concepts are defined:

(a) *Associate Director* means the Associate Director, State and Local Programs and Support, FEMA or designee.

(b) *Director* means the Director, FEMA or designee.

(c) *EPZ* means Emergency Planning Zone.

(d) *FEMA* means the Federal Emergency Management Agency.

(e) *NRC* means the Nuclear Regulatory Commission.

(f) *Regional Director* means the Regional Director of FEMA or designee.

(g) *Local government* means boroughs, cities, counties, municipalities, parishes, towns, townships or other local jurisdictions within the plume and ingestion exposure pathway EPZs that have specific roles in emergency planning and preparedness.

(h) *Decline or fail* means a situation where State or local governments do not participate in preparing offsite emergency plans or have significant planning or preparedness inadequacies and have not demonstrated the commitment or capabilities to correct those inadequacies in a timely manner so as to satisfy NRC licensing requirements.

(i) *Governor* means the Governor of a State or his/her designee.

(j) *Certification* means the written justification by a licensee of the need for Federal compensatory assistance.

This certification is required to activate the Federal assistance under this part.

(k) *Responsible local official* means the highest elected official of an appropriate local government.

(l) *Technical assistance* means services provided by FEMA and other Federal agencies to facilitate offsite radiological emergency planning and preparedness such as: Provision of support for the preparation off site radiological emergency response plans and procedures; FEMA coordination of services from other Federal agencies; provision and interpretation of Federal guidance; provision of Federal and contract personnel to offer advice and recommendations for specific aspects of preparedness such as alert and notification and emergency public information.

(m) *Federal facilities and resources* means personnel, property (land, buildings, vehicles, equipment), and operational capabilities controlled by the Federal government related to establishing and maintaining radiological emergency response preparedness.

(n) *Licensee* means the utility which has applied for or has received a license from the NRC to operate a commercial nuclear power plant.

(o) *Reimbursement* means the payment to FEMA/Federal agencies, jointly or severally, by a licensee and State and local governments for assistance and services provided in processing certifications and implementing Federal compensatory assistance under this part 352.

(p) *Host FEMA Regional Office* means the FEMA Regional Office that has primary jurisdiction by virtue of the nuclear power plant being located within its geographic boundaries.

(q) *Command and control* means making and issuing protective action decisions and directing offsite emergency response resources, agencies, and activities.

§ 352.2 Scope, purpose and applicability.

(a) This part applies whenever State or local governments, either individually or together, decline or fail to prepare commercial nuclear power plant offsite radiological emergency pre-

paredness plans that are sufficient to satisfy NRC licensing requirements or to participate adequately in the preparation, demonstration, testing, exercise, or use of such plans. In order to request the assistance provided for in this part, an affected nuclear power plant applicant or licensee shall certify in writing to FEMA that the above situation exists.

(b) The purposes of this part are as follows: (1) To establish policies and procedures for the submission of a licensee certification for Federal assistance under Executive Order 12657; (2) set forth policies and procedures for FEMA's determination to accept, accept with modification, or reject the licensee certification; (3) establish a framework for providing Federal assistance to licensees; and (4) provide procedures for the review and evaluation of the adequacy of offsite radiological emergency planning and preparedness. Findings and determinations on offsite planning and preparedness made under this part are provided to the NRC for its use in the licensing process.

(c) This part applies only in instances where Executive Order 12657 is used by a licensee and its provisions do not affect the validity of the emergency preparedness developed by the licensee independent of or prior to Executive Order 12657.

Subpart A—Certifications and Determinations

§ 352.3 Purpose and scope.

This subpart establishes policies and procedures for submission by a commercial nuclear power plant licensee of a certification for Federal assistance under Executive Order 12657. It contains policies and procedures for FEMA's determinations, with respect to a certification. It establishes a framework for providing Federal assistance to licensees. It also provides procedures for review and evaluation of the adequacy of licensee offsite radiological emergency planning and preparedness.

§ 352.4 Licensee certification.

(a) A licensee which seeks Federal assistance under this part shall submit a

certification to the host FEMA Region Director that a decline or fail situation exists. The certification shall be in the form of a letter from the chief executive officer of the licensee. The contents of this letter shall address the provisions set forth in paragraphs (b) and (c) of this section.

(b) The licensee certification shall delineate why such assistance is needed based on the criteria of decline or fail for the relevant State or local governments.

(c) The licensee certification shall document requests to and responses from the Governor(s) or responsible local official(s) with respect to the efforts taken by the licensee to secure their participation, cooperation, commitment of resources or timely correction of planning and preparedness failures.

(Approved by the Office of Management and Budget (OMB) under control number 3067-0201)

§ 352.5 FEMA action on licensee certification.

(a) Upon receiving a licensee certification, the host Regional Director shall immediately notify FEMA Headquarters of the licensee certification. Within 5 days the host Regional Director shall notify the Governor of an affected State and the chief executive officer of any local government that a certification has been received, and make a copy of the certification available to such persons. Within 10 days, the host Regional Director shall acknowledge in writing the receipt of the certification to the licensee.

(b) Within 15 days of receipt of the certification, the Regional Director shall publish a notice in the FEDERAL REGISTER that a certification from the licensee has been received, and that copies are available at the Regional Office for review and copying in accordance with 44 CFR 5.26.

(c) FEMA Headquarters shall notify the NRC of receipt of the certification and shall request advice from the NRC on whether a decline or fail situation exists.

(d) State and local governments may submit written statements to the host Regional Director outlining their position as to the facts stated in the letter

of certification. Such statements shall be submitted to FEMA within 10 days of the date of notification provided to State and local government under § 352.5(a). Any such statements shall be a part of the record and will be considered in arriving at recommendations or determinations made under the provisions of this part.

(e) The host FEMA Regional Office shall provide, after consulting with State and responsible local officials, a recommended determination on whether a decline or fail situation exists to the FEMA Associate Director within 30 days of receipt of the licensee certification.

(f) The FEMA Associate Director shall make a determination on whether a decline or fail situation exists within 45 days of receipt of the licensee certification and shall advise the licensee, NRC, and State and local officials.

(g) The times for actions set out above may be extended up to an aggregate of 30 days by the host Regional Director or Associate Director, as appropriate.

§ 352.6 FEMA determination on the commitment of Federal facilities and resources.

(a) A licensee request for Federal facilities and resources shall document the licensee's maximum feasible use of its resources and its efforts to secure the use of State and local government and volunteer resources.

(b) Upon a licensee request for Federal facilities and resources, FEMA headquarters shall notify NRC and request advice from the NRC as to whether the licensee has made maximum use of its resources and the extent to which the licensee has complied with 10 CFR 50.47(c)(1). The host FEMA Regional Director shall make a recommendation to the FEMA Associate Director on whether the provision of these facilities and resources is warranted. The FEMA Associate Director shall make a final determination as to whether Federal facilities and resources are needed.

(c) In making the determination under paragraph (b) of this section, FEMA:

(1) Shall work actively with the licensee, and before relying upon any

Federal resources, shall make maximum feasible use of the licensee's own resources, which may include agreements with volunteer organizations and other government entities and agencies; and

(2) Shall assume that, in the event of an actual radiological emergency or disaster, State and local authorities would contribute their full resources and exercise their authorities in accordance with their duties to protect the public and would act generally in conformity with the licensee's radiological emergency preparedness plan.

(d) The FEMA Associate Director shall make a determination on the need for and commitment of Federal facilities and resources. The FEMA determination shall be made in consultation with affected Federal agencies and in accordance with 44 CFR 352.21. FEMA shall inform the licensee, the States and affected local governments in writing of the Federal support which will be provided. This information shall identify Federal agencies that are to provide Federal support, the extent and purpose of the support to be provided, the Federal facilities and resources to be committed and the limitations on their use. The provision of the identified Federal support shall be made under the policies and procedures of subpart B of this part.

§ 352.7 Review and evaluation.

FEMA shall conduct its activities and make findings under this part in a manner consistent with 44 CFR part 350 to the extent that those procedures are appropriate and not inconsistent with the intent and procedures required by E.O. 12657. This Order shall take precedence, and any inconsistencies shall be resolved under the procedures in the NRC/FEMA Memorandum of Understanding (MOU) on planning and preparedness. (50 FR 15485, April 18, 1985)

Subpart B—Federal Participation

§ 352.20 Purpose and scope.

This subpart establishes policy and procedures for providing support for offsite radiological emergency planning and preparedness in a situation where Federal support under Executive

Order 12657 (E.O. 12657) has been requested. This subpart:

(a) Describes the process for providing Federal technical assistance to the licensee for developing its offsite emergency response plan after an affirmative determination on the licensee certification under subpart A (44 CFR 352.5(f));

(b) Describes the process for providing Federal facilities and resources to the licensee after a determination under subpart A (44 CFR 352.6(d)) that Federal resources are required;

(c) Describes the principal response functions which Federal agencies may be called upon to provide;

(d) Describes the process for allocating responsibilities among Federal agencies for planning site-specific emergency response functions; and

(e) Provides for the participation of Federal agencies, including the members of the FRPCC and the RACs.

§ 352.21 Participating Federal agencies.

(a) FEMA may call upon any Federal agency to participate in planning for the use of Federal facilities and resources in the licensee offsite emergency response plan.

(b) FEMA may call upon the following agencies, and others as needed, to provide Federal technical assistance and Federal facilities and resources:

- (1) Department of Commerce;
- (2) Department of Defense;
- (3) Department of Energy;
- (4) Department of Health and Human Services;
- (5) Department of Housing and Urban Development;
- (6) Department of the Interior;
- (7) Department of Transportation;
- (8) Environmental Protection Agency;
- (9) Federal Communications Commission;
- (10) General Services Administration;
- (11) National Communications System;
- (12) Nuclear Regulatory Commission;
- (13) United States Department of Agriculture; and
- (14) Department of Veterans Affairs.

(c) FEMA is the Federal agency primarily responsible for coordinating Federal assistance. FEMA may enter

into Memorandums of Understanding (MOU) and other instruments with Federal agencies to provide technical assistance and to arrange for the commitment and utilization of Federal facilities and resources as necessary. FEMA also may use a MOU to delegate to another Federal agency, with the consent of that agency, any of the functions and duties assigned to FEMA. Following review and approval by OMB, FEMA will publish such documents in the FEDERAL REGISTER.

§ 352.22 Functions of the Federal Radiological Preparedness Coordinating Committee (FRPCC).

Under 44 CFR part 351, the role of the FRPCC is to assist FEMA in providing policy direction for the program of technical assistance to State and local governments in their radiological emergency planning and preparedness activities. Under this subpart, the role of the FRPCC is to provide advice to FEMA regarding Federal assistance and Federal facilities and resources for implementing subparts A and B of this part. This assistance activity is extended to licensees. The FRPCC will assist FEMA in revising the Federal Radiological Emergency Response Plan (FRERP).

§ 352.23 Functions of a Regional Assistance Committee (RAC).

(a) Under 44 CFR part 351, the role of a RAC is to assist State and local government officials to develop their radiological emergency plans, to review the plans, and to observe exercises to evaluate the plans. Under subparts A and B of this part, these technical assistance activities are extended to the licensee.

(b) Prior to a determination under subpart A (44 CFR 352.6(d)) that Federal facilities and resources are needed, the designated RAC for the specific site will assist the licensee, as necessary, in evaluating the need for Federal facilities and resources, in addition to providing technical assistance under § 352.23(a).

(c) In accomplishing the foregoing, the RAC will use the standards and evaluation criteria in NUREG-0654/

FEMA-REP-1, Rev. 1 and Supp. 1,¹ or approved alternative approaches, and RAC members shall render such technical assistance as appropriate to their agency mission and expertise.

(d) Following determination under subpart A (44 CFR 352.6(d)) that Federal facilities and resources are needed, the RAC will assist FEMA in identifying agencies and specifying the Federal facilities and resources which the agencies are to provide.

§ 352.24 Provision of technical assistance and Federal facilities and resources.

(a) Under a determination under subpart A (44 CFR 352.5(f) and 352.4(e)) that a decline or fail situation exists, FEMA and other Federal agencies will provide technical assistance to the licensee. Such assistance may be provided during the pendency of an appeal under § 352.29.

(b) The applicable criteria for the use of Federal facilities and resources are set forth in subpart A (44 CFR 352.6(c)(1)(2)). Upon a determination under subpart A (44 CFR 352.6(d)) that Federal resources or facilities will be required, FEMA will consult with the FRPCC, the RAC, the individual Federal agencies, and the licensee, to determine the extent of Federal facilities and resources that the government could provide, and the most effective way to do so. After such consultation, FEMA will specifically request Federal agencies to provide those Federal facilities and resources. The Federal agencies, in turn, will respond to confirm the availability of such facilities and resources and provide estimates of their costs.

(c) FEMA will inform the licensee in writing of the Federal support which will be provided. This information will identify Federal agencies which are to be included in the plan, the extent and purpose of technical assistance to be provided and the Federal facilities and resources to be committed, and the limitations of their use. The information will also describe the requirements for reimbursement to the Federal Government for this support.

¹Copy available from FEMA Distribution Center, P.O. Box 70274 Washington, DC 20024

(d) FEMA will coordinate the Federal effort in implementing the determinations made under subpart A (44 CFR 352.5(f) and 352.6(d)) so that each Federal agency maintains the committed technical assistance, facilities, and resources after the licensee offsite emergency response plan is completed. FEMA and other Federal agencies will participate in training, exercises, and drills, in support of the licensee offsite emergency response plan.

(e) In carrying out paragraphs (a) through (c) of this section, FEMA will keep affected State and local governments informed of actions taken.

(Approval by the OMB under control number 3067-0201)

\$ 352.25 Limitation on committing Federal facilities and resources for emergency preparedness.

(a) The commitment of Federal facilities and resources will be made through the authority of the affected Federal agencies.

(b) In implementing a determination under subpart A (44 CFR 352.6(d)), that Federal facilities and resources are necessary for emergency preparedness, FEMA shall take care not to supplant State and local resources. Federal facilities and resources shall be substituted for those of the State and local governments in the licensee offsite emergency response plan only to the extent necessary to compensate for the nonparticipation or inadequate participation of those governments, and only as a last resort after consultation with the Governor(s) and responsible local officials in the affected area(s) regarding State and local participation.

(c) All Federal planning activities described in this subpart will be conducted under the assumption that, in the event of an actual radiological emergency or disaster, State and local authorities would contribute their full resources and exercise their authorities in accordance with their duties to protect the public from harm and would act, generally, in conformity with the licensee's offsite emergency response plan.

\$ 352.26 Arrangements for Federal response in the licensee offsite emergency response plan.

Federal agencies may be called upon to assist the licensee in developing a licensee offsite emergency response plan in areas such as:

(a) Arrangements for use of Federal facilities and resources for response functions such as:

(1) Prompt notification of the emergency to the public;

(2) Assisting in any necessary evacuation;

(3) Providing reception centers or shelters and related facilities and services for evacuees;

(4) Providing emergency medical services at Federal hospitals; and

(5) Ensuring the creation and maintenance of channels of communication from commercial nuclear power plant licensees to State and local governments and to surrounding members of the public.

(b) Arrangements for transferring response functions to State and local governments during the response in an actual emergency; and

(c) Arrangements which may be necessary for FEMA coordination of the response of other Federal agencies.

\$ 352.27 Federal role in the emergency response.

In addition to the Federal component of the licensee offsite emergency response plan described in subpart B (§352.26), and after complying with E.O. 12657, Section 2(b)(2), which states that FEMA:

(2) Shall take care not to supplant State and local resources and that FEMA shall substitute its own resources for those of State and local governments only to the extent necessary to compensate for the nonparticipation or inadequate participation of those governments, and only as a last resort after appropriate consultation with the Governors and responsible local officials in the affected area regarding State and local participation;

FEMA shall provide for initial Federal response activities, including command and control of the offsite response, as may be needed. Any Federal response role, undertaken pursuant to this section, shall be transferred to State and

local governments as soon as feasible after the onset of an actual emergency.

§ 352.28 Reimbursement.

In accordance with Executive Order 12657, Section 6(d), and to the extent permitted by law, FEMA will coordinate full reimbursement, either jointly or severally, to the agencies performing services or furnishing resources, from any affected licensee and from any affected nonparticipating or inadequately participating State or local government.

§ 352.29 Appeal process.

(a) Any interested party may appeal a determination made by the Associate Director, under §§ 352.5 and 352.6 of this part, by submitting to the Director, FEMA, a written notice of appeal, within 30 days after issuance. The appeal is to be addressed to the Director, Federal Emergency Management Agency, 500 C Street SW., Washington, DC 20472. The appeal letter shall state the specific reasons for the appeal and include documentation to support appellant arguments. The appeal is limited to matters of record under §§ 352.5 and 352.6.

(b) Within 30 days of receipt of this letter, the FEMA Director or designee will review the record and make a final determination on the matter.

(c) Copies of this determination shall be furnished to the Appellant, the State(s), affected local governments, and the NRC.

(d) For purposes of this section, the term *interested party* means only a licensee, a State or a local government, as defined in § 352.1(g).

PART 353—FEE FOR SERVICES IN SUPPORT, REVIEW AND APPROVAL OF STATE AND LOCAL GOVERNMENT OR LICENSEE RADIOLOGICAL EMERGENCY PLANS AND PREPAREDNESS

Sec.

353.1 Purpose.

353.2 Scope.

353.3 Definitions.

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353.7 Failure to pay.

APPENDIX A TO PART 353—MEMORANDUM OF UNDERSTANDING BETWEEN FEDERAL EMERGENCY MANAGEMENT AGENCY AND NUCLEAR REGULATORY COMMISSION

AUTHORITY: 31 U.S.C. 9701; E.O. 12657 of Nov. 18, 1988; 3 CFR, 1988 Comp., p. 611; 50 U.S.C. app. 2251 note; E.O. 12148 of July 20, 1979; 3 CFR, 1979 Comp., p. 412, 50 U.S.C. app. 2251 note.

SOURCE: 56 FR 9455, March 6, 1991, unless otherwise noted.

§ 353.1 Purpose.

This part sets out fees charged for site-specific radiological emergency planning and preparedness services rendered by the Federal Emergency Management Agency, as authorized by 31 U.S.C. 9701.

§ 353.2 Scope.

The regulation in this part applies to all licensees who have applied for or have received a license from the Nuclear Regulatory Commission to operate a commercial nuclear power plant.

§ 353.3 Definitions.

As used in this part, the following terms and concepts are defined:

(a) *FEMA* means the Federal Emergency Management Agency.

(b) *NRC* means the Nuclear Regulatory Commission.

(c) *Certification* means the written justification by a licensee of the need for Federal compensatory assistance, as authorized in 44 CFR part 352 and E.O. 12657.

(d) *Technical assistance* means services provided by FEMA to facilitate offsite radiological emergency planning and preparedness such as provision of support for the preparation of offsite radiological emergency response plans and procedures; provision of advice and recommendations for specific aspects of preparedness such as alert and notification and emergency public information.

(e) *Licensee* means the utility which has applied for or has received a license from the NRC to operate a commercial nuclear power plant.

(f) *Governor* means the Governor of a State or his/her designee.

(g) *RAC* means Regional Assistance Committee chaired by FEMA with representatives from the Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Energy, Department of Agriculture, Department of Transportation, Department of Commerce and other Federal Departments and agencies as appropriate.

(h) *REP* means FEMA's Radiological Emergency Preparedness Program.

(i) *Fiscal Year* means Federal fiscal year commencing on the first day of October through the thirtieth day of September.

(j) *Federal Radiological Preparedness Coordinating Committee* is the national level committee chaired by FEMA with representatives from the Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Interior, Department of Energy, Department of Transportation, United States Department of Agriculture, Department of Commerce and other Federal Departments and agencies as appropriate.

§ 353.4 Payment of fees.

Fees for site-specific offsite radiological emergency plans and preparedness services and related site-specific legal services are payable upon notification by FEMA. FEMA services will be billed at 6-month intervals for all accumulated costs on a site-specific basis. Each bill will identify the costs related to services for each nuclear power plant site.

§ 353.5 Average cost per FEMA professional staff-hour.

Fees for FEMA services rendered will be calculated based upon the costs for such services using a professional staff rate per hour equivalent to the sum of the average cost to the agency of maintaining a professional staff member performing site-specific services related to the Radiological Emergency Preparedness Program, including salary, benefits, administrative support, travel and overhead. This rate will be charged when FEMA performs such services as: Development of exercise objectives and scenarios, pre-exercise

logistics, exercise conduct and participation, evaluation, meetings and reports; review and approval of Plan revisions that are utility-requested or exercise inadequacy related; remedial exercise, medical drill or any other exercise or drill upon which a license is predicated, with regard to preparation, review, conduct, participation, evaluation, meetings and reports; the issuance of interim findings pursuant to the FEMA/NRC Memorandum of Understanding (MOU) (App. A of this part); review of utility plan submissions through the NRC under the MOU; utility certification submission review under 44 CFR part 352 and follow-on activities; site-specific adjudicatory proceedings and any other site-specific legal costs and technical assistance that is utility requested or exercise inadequacy related. The professional staff rate for FY 91 is \$39.00 per hour. The referenced FEMA/NRC MOU is provided in this rule as appendix A. The professional staff rate for the REP Program and related legal services will be revised on a fiscal year basis using the most current fiscal data available and the revised hourly rate will be published as a notice in the FEDERAL REGISTER for each fiscal year if the rate increases or decreases.

§ 353.6 Schedule of services.

Recipients shall be charged the full cost of site-specific services based upon the appropriate professional hourly staff rate for the FEMA services described in this Section and for related contractual services which will be charged to the licensee by FEMA, at the rate and cost incurred.

(a) When a State seeks formal review and approval by FEMA of the State's radiological emergency response plan pursuant to 44 CFR part 350 (Review and Approval Process of State and Local Radiological Emergency Plans and Preparedness), FEMA shall provide the services as described in 44 CFR part 350 in regard to that request and fees will be charged for such services to the licensee, which is the ultimate beneficiary of FEMA services. This provision does not apply where an operating license has been granted or the application denied or withdrawn, except as necessary to support biennial exercises

and related activities. Fees will be charged for all FEMA, but not other Federal agency activities related to such services, including but not limited to the following:

(1) Development of exercise objectives and scenarios, preexercise logistics, exercise conduct and participation, evaluation, meetings and reports.

(2) Review of plan revisions that are exercise-inadequacy related;

(3) Technical assistance that is exercise-inadequacy related;

(4) Remedial exercise, medical drill, or any other exercise or drill upon which maintenance of a license is predicated, with regard to preparation, review, conduct, participation, evaluation, meetings and reports.

(b) Interim findings. Where the NRC seeks from FEMA under the FEMA/NRC MOU an interim finding of the status of radiological emergency planning and preparedness at a particular time for a nuclear power plant, FEMA shall assess a fee to the licensee for providing this service. The provision of this service consists of making a determination whether the plans are adequate to protect the health and safety of the public living in the vicinity of the nuclear power facility by providing reasonable assurance that appropriate protective measures can be taken off-site in the event of a radiological emergency and that such plans are capable of being implemented.

(c) NRC utility plan submissions. Fees will be charged for all FEMA but not other Federal agency activities related to such services, including but not limited to the following:

(1) Development of exercise objectives and scenarios, preexercise logistics, exercise conduct and participation, evaluation and post-exercise meetings and reports.

(2) Notice and conduct of public meeting.

(3) Regional finding and determination of adequacy of plans and preparedness followed by review by FEMA Headquarters resulting in final FEMA determination of adequacy of plans and preparedness.

(4) Remedial exercise, medical drill, or any other exercise or drill upon which maintenance of a license is predicated, with regard to preparation,

review, conduct, participation, evaluation, meetings and reports.

(d) Utility certification submission review. When a licensee seeks Federal assistance within the framework of 44 CFR part 352 due to the decline or failure of a State or local government to adequately prepare an emergency plan, FEMA shall process the licensee's certification and make the determination whether a decline or fail situation exists. Fees will be charged for services rendered in making the determination. Upon the determination that a decline or fail situation does exist, any services provided or secured by FEMA consisting of assistance to the licensee, as described in 44 CFR part 352, will have a fee charged for such services.

(e) FEMA participation in site-specific NRC adjudicatory proceedings and any other site-specific legal costs. Where FEMA participates in NRC licensing proceedings and any related court actions to support FEMA findings as a result of its review and approval of offsite emergency plans and preparedness, or provides legal support for any other site specific FEMA activities comprised in this rule, fees will be charged to the licensee for such participation.

(f) Rendering technical assistance. Where FEMA is requested by a licensee to provide any technical assistance, or where a State or local government requests technical assistance in order to correct an inadequacy identified as a result of a biennial exercise or any other drill or exercise upon which maintenance of a license is predicated, FEMA will charge such assistance to the licensee for the provision of such service.

§ 353.7 Failure to pay.

In any case where there is a dispute over the FEMA bill or where FEMA finds that a licensee has failed to pay a prescribed fee required under this part, procedures will be implemented in accordance with 44 CFR part 11 subpart C to effectuate collections under the Debt Collection Act of 1982 (31 U.S.C. 3711 *et seq.*).

APPENDIX A TO PART 353—MEMORANDUM OF UNDERSTANDING BETWEEN FEDERAL EMERGENCY MANAGEMENT AGENCY AND NUCLEAR REGULATORY COMMISSION

The Federal Emergency Management Agency (FEMA) and the Nuclear Regulatory Commission (NRC) have entered into a new Memorandum of Understanding (MOU) Relating To Radiological Emergency Planning and Preparedness. This supersedes a memorandum entered into on November 1, 1980 (published December 16, 1980, 45 FR 82713), revised April 9, 1985 (published April 18, 1985, 50 FR 15485), and published as Appendix A to 44 CFR part 353. The substantive changes in the new MOU are: (1) Self-initiated review by the NRC; (2) Early Site Permit process; (3) adoption of FEMA exercise time-frames; (4) incorporation of FEMA definition of exercise deficiency; (5) NRC commitment to work with licensees in support of State and local governments to correct exercise deficiencies; (6) correlation of FEMA actions on withdrawal of approvals under 44 CFR part 350 and NRC enforcement actions; and (7) disaster-initiated reviews in situations that affect offsite emergency infrastructures. The text of the MOU follows.

MEMORANDUM OF UNDERSTANDING BETWEEN NRC AND FEMA RELATING TO RADIOLOGICAL EMERGENCY PLANNING AND PREPAREDNESS

I. Background and Purposes

This Memorandum of Understanding (MOU) establishes a framework of cooperation between the Federal Emergency Management Agency (FEMA) and the U.S. Nuclear Regulatory Commission (NRC) in radiological emergency response planning matters so that their mutual efforts will be directed toward more effective plans and related preparedness measures at and in the vicinity of nuclear reactors and fuel cycle facilities which are subject to 10 CFR part 50, appendix E, and certain other fuel cycle and materials licensees which have potential for significant accidental offsite radiological releases. The memorandum is responsive to the President's decision of December 7, 1979, that FEMA will take the lead in offsite planning and response, his request that NRC assist FEMA in carrying out this role, and the NRC's continuing statutory responsibility for the radiological health and safety of the public.

On January 14, 1980, the two agencies entered into a "Memorandum of Understanding Between NRC and FEMA to Accomplish a Prompt Improvement in Radiological Emergency Preparedness," that was responsive to the President's December 7, 1979, statement. A revised and updated Memorandum of Un-

derstanding became effective November 1, 1980. The MOU was further revised and updated on April 9, 1985. This MOU is a further revision to reflect the evolving relationship between NRC and FEMA and the experience gained in carrying out the provisions of the previous MOU's. This MOU supersedes these two earlier versions of the MOU.

The general principles agreed to in the previous MOU's and reaffirmed in this MOU, are as follows: FEMA coordinates all Federal planning for the offsite impact of radiological emergencies and takes the lead for assessing offsite radiological emergency response plans¹ and preparedness, makes findings and determinations as to the adequacy and capability of implementing offsite plans, and communicates those findings and determinations to the NRC. The NRC reviews those FEMA findings and determinations in conjunction with the NRC onsite findings for the purpose of making determinations on the overall state of emergency preparedness. These overall findings and determinations are used by NRC to make radiological health and safety decisions in the issuance of licenses and the continued operation of licensed plants to include taking enforcement actions as notices of violations, civil penalties, orders, or shutdown of operating reactors. This delineation of responsibilities avoids duplicative efforts by the NRC staff in offsite preparedness matters. However, if FEMA informs the NRC that an emergency, unforeseen contingency, or other reason would prevent FEMA from providing a requested finding in a reasonable time, then, in consultation with FEMA, the NRC might initiate its own review of offsite emergency preparedness.

A separate MOU dated October 22, 1980, deals with NRC/FEMA cooperation and responsibilities in response to an actual or potential radiological emergency. Operations Response Procedures have been developed that implement the provisions of the Incident Response MOU. These documents are intended to be consistent with the Federal Radiological Emergency Response Plan which describes the relationships, roles, and responsibilities of Federal Agencies for responding to accidents involving peacetime nuclear emergencies. On December 1, 1991, the NRC and FEMA also concluded a separate MOU in support of Executive Order 12657 (FEMA Assistance in Emergency Preparedness Planning at Commercial Nuclear Power Plants).

¹ Assessments of offsite plans may be based on State and local government plans submitted to FEMA under its rule (44 CFR Part 350), and as noted in 44 CFR 350.3(f), may also be based on plans currently available to FEMA or furnished to FEMA through the NRC/FEMA Steering Committee.

II. Authorities and Responsibilities

FEMA-Executive Order 12148 charges the Director, FEMA, with the responsibility to " * * * establish Federal policies for, and coordinate, all civil defense and civil emergency planning, management, mitigation, and assistance functions of Executive agencies" (Section 2-101) and " * * * represent the President in working with State and local governments and the private sector to stimulate vigorous participation in civil emergency preparedness, mitigation, response, and recovery programs" (Section 2-104.).

On December 7, 1979, the President, in response to the recommendations of the Kemeny Commission on the Accident at Three Mile Island, directed that FEMA assume lead responsibility for all offsite nuclear emergency planning and response.

Specifically, the FEMA responsibilities with respect to radiological emergency preparedness as they relate to NRC are:

1. To take the lead in offsite emergency planning and to review and assess offsite emergency plans and preparedness for adequacy.

2. To make findings and determinations as to whether offsite emergency plans are adequate and can be implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment). Notwithstanding the procedures which are set forth in 44 CFR part 350 for requesting and reaching a FEMA administrative approval of State and local plans, findings, and determinations on the current status of emergency planning and preparedness around particular sites, referred to as interim findings, will be provided by FEMA for use as needed in the NRC licensing process. Such findings will be provided by FEMA on mutually agreed to schedules or on specific NRC request. The request and findings will normally be by written communications between the co-chairs of the NRC/FEMA Steering Committee. An interim finding provided under this arrangement will be an extension of FEMA's procedures for review and approval of offsite radiological emergency plans and preparedness set forth in 44 CFR part 350. It will be based on the review of currently available plans and, if appropriate, joint exercise results related to a specific nuclear power plant site.

If the review involves an application under 10 CFR part 52 for an early site permit, the NRC will forward to FEMA pertinent information provided by the applicant and consult with FEMA as to whether there is any significant impediment to the development of offsite emergency plans. As appropriate, depending upon the nature of information provided by the applicant, the NRC will also request that FEMA determine whether major features of offsite emergency plans submitted by the applicant are acceptable,

or whether offsite emergency plans submitted by the applicant are adequate, as discussed below.

An interim finding based only on the review of currently available offsite plans will include an assessment as to whether these plans are adequate when measured against the standards and criteria of NUREG-0654/FEMA-REP-1, and, pending a demonstration through an exercise, whether there is reasonable assurance that the plans can be implemented. The finding will indicate one of the following conditions: (1) Plans are adequate and there is reasonable assurance that they can be implemented with only limited or no corrections needed; (2) plans are adequate, but before a determination can be made as to whether they can be implemented, corrections must be made to the plans or supporting measures must be demonstrated (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment) or (3) plans are inadequate and cannot be implemented until they are revised to correct deficiencies noted in the Federal review.

If, in FEMA's view, the plans that are available are not completed or are not ready for review, FEMA will provide NRC with a status report delineating milestones for preparation of the plan by the offsite authorities as well as FEMA's actions to assist in timely development and review of the plans.

An interim finding on preparedness will be based on review of currently available plans and joint exercise results and will include an assessment as to (1) whether offsite emergency plans are adequate as measured against the standards and criteria of NUREG-0654/FEMA-REP-1 and (2) whether the exercise(s) demonstrated that there is reasonable assurance that the plans can be implemented.

An interim finding on preparedness will indicate one of the following conditions: (1) There is reasonable assurance that the plans are adequate and can be implemented as demonstrated in an exercise; (2) there are deficiencies that must be corrected; or (3) FEMA is undecided and will provide a schedule of actions leading to a decision.

3. To assume responsibility, as a supplement to State, local, and utility efforts, for radiological emergency preparedness training of State and local officials.

4. To develop and issue an updated series of interagency assignments which delineate respective agency capabilities and responsibilities and define procedures for coordination and direction for emergency planning and response. [Current assignments are in 44 CFR part 351, March 11, 1982. (47 FR 10758)]

NRC-The Atomic Energy Act of 1954, as amended, requires that the NRC grant licenses only if the health and safety of the public is adequately protected. While the

Atomic Energy Act does not specifically require emergency plans and related preparedness measures, the NRC requires consideration of overall emergency preparedness as a part of the licensing process. The NRC rules (10 CFR 50.33, 50.34, 50.47, 50.54, and appendix E to 10 CFR part 50, and 10 CFR part 52) include requirements for the licensee's emergency plans.

Specifically, the NRC responsibilities for radiological emergency preparedness are:

1. To assess licensee emergency plans for adequacy. This review will include organizations with whom licensees have written agreements to provide onsite support services under emergency conditions.

2. To verify that licensee emergency plans are adequately implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment).

3. To review the FEMA findings and determinations as to whether offsite plans are adequate and can be implemented.

4. To make radiological health and safety decisions with regard to the overall state of emergency preparedness (i.e., integration of emergency preparedness onsite as determined by the NRC and offsite as determined by FEMA and reviewed by NRC) such as assurance for continued operation, for issuance of operating licenses, or for taking enforcement actions, such as notices of violations, civil penalties, orders, or shutdown of operating reactors.

III. Areas of Cooperation

A. NRC Licensing Reviews

FEMA will provide support to the NRC for licensing reviews related to reactors, fuel facilities, and materials licensees with regard to the assessment of the adequacy of offsite radiological emergency response plans and preparedness. This will include timely submittal of an evaluation suitable for inclusion in NRC safety evaluation reports.

Substantially prior to the time that a FEMA evaluation is required with regard to fuel facility or materials license review, NRC will identify those fuel and materials licensees with potential for significant accidental offsite radiological releases and transmit a request for review to FEMA as the emergency plans are completed.

FEMA routine support will include providing assessments, findings and determinations (interim and final) on offsite plans and preparedness related to reactor license reviews. To support its findings and determinations, FEMA will make expert witnesses available before the Commission, the NRC Advisory Committee on Reactor Safeguards, NRC hearing boards and administrative law judges, for any court actions, and during any related discovery proceedings.

FEMA will appear in NRC licensing proceedings as part of the presentation of the NRC staff. FEMA counsel will normally present FEMA witnesses and be permitted, at the discretion of the NRC licensing board, to cross-examine the witnesses of parties, other than the NRC witnesses, on matters involving FEMA findings and determinations, policies, or operations; however, FEMA will not be asked to testify on status reports. FEMA is not a party to NRC proceedings and, therefore, is not subject to formal discovery requirements placed upon parties to NRC proceedings. Consistent with available resources, however, FEMA will respond informally to discovery requests by parties. Specific assignment of professional responsibilities between NRC and FEMA counsel will be primarily the responsibility of the attorneys assigned to a particular case. In situations where questions of professional responsibility cannot be resolved by the attorneys assigned, resolution of any differences will be made by the General Counsel of FEMA and the General Counsel of the NRC or their designees. NRC will request the presiding Board to place FEMA on the service list for all litigation in which it is expected to participate.

Nothing in this MOU shall be construed in any way to diminish NRC's responsibility for protecting the radiological health and safety of the public.

B. FEMA Review of Offsite Plans and Preparedness

NRC will assist in the development and review of offsite plans and preparedness through its membership on the Regional Assistance Committees (RAC). FEMA will chair the Regional Assistance Committees. Consistent with NRC's statutory responsibility, NRC will recognize FEMA as the interface with State and local governments for interpreting offsite radiological emergency planning and preparedness criteria as they affect those governments and for reporting to those governments the results of any evaluation of their radiological emergency plans and preparedness.

Where questions arise concerning the interpretation of the criteria, such questions will continue to be referred to FEMA Headquarters, and when appropriate, to the NRC/FEMA Steering Committee to assure uniform interpretation.

C. Preparation for and Evaluation of Joint Exercises

FEMA and NRC will cooperate in determining exercise requirements for licensees, and State and local governments. They will also jointly observe and evaluate exercises. NRC and FEMA will institute procedures to enhance the review of objectives and scenarios for joint exercises. This review is to

assure that both the onsite considerations of NRC and the offsite considerations of FEMA are adequately addressed and integrated in a manner that will provide for a technically sound exercise upon which an assessment of preparedness capabilities can be based. The NRC/FEMA procedures will provide for the availability of exercise objectives and scenarios sufficiently in advance of scheduled exercises to allow enough time for adequate review by NRC and FEMA and correction of any deficiencies by the licensee. The failure of a licensee to develop a scenario that adequately addresses both onsite and offsite considerations may result in NRC taking enforcement actions.

The FEMA reports will be a part of an interim finding on emergency preparedness; or will be the result of an exercise conducted pursuant to FEMA's review and approval procedures under 44 CFR part 350 and NRC's requirement under 10 CFR part 50, appendix E, Section IV.F. Exercise evaluations will identify one of the following conditions: (1) There is reasonable assurance that the plans are adequate and can be implemented as demonstrated in the exercise; (2) there are deficiencies that must be corrected; or (3) FEMA is undecided and will provide a schedule of actions leading to a decision. The schedule for issuance of the draft and final exercise reports will be as shown in FEMA-REP-14 (Radiological Emergency Preparedness Exercise Manual).

The deficiency referred to in (2) above is defined as an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant. Because of the potential impact of deficiencies on emergency preparedness, they should be corrected within 120 days through appropriate remedial actions, including remedial exercises, drills, or other actions.

Where there are deficiencies of the types noted above, and when there is a potential for remedial actions, FEMA Headquarters will promptly (1-2 days) discuss these with NRC Headquarters. Within 10 days of the exercise, official notification of identified deficiencies will be made by FEMA to the State, NRC Headquarters, and the RAC with an information copy to the licensee. NRC will formally notify the licensee of the deficiencies and monitor the licensee's efforts to work with State and local authorities to correct the deficiencies. Approximately 60 days after official notification of the deficiency, the NRC, in consultation with FEMA, will assess the progress being made toward resolution of the deficiencies.

D. Withdrawal of Reasonable Assurance Finding

If FEMA determines under 44 CFR 350.13 of its regulations that offsite emergency plans or preparedness are not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of radiological emergency to protect the health and safety of the public, FEMA shall, as described in its rule, withdraw approval.

Upon receiving notification of such action from FEMA, the NRC will promptly review FEMA's findings and determinations and formally document the NRC's position. When, as described in 10 CFR 50.54(s)(2)(ii) and 50.54(s)(3) of its regulations, the NRC finds the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency, the NRC will notify the affected licensee accordingly and start the "120-day clock."²

E. Emergency Planning and Preparedness Guidance

NRC has lead responsibility for the development of emergency planning and preparedness guidance for licensees. FEMA has lead responsibility for the development of radiological emergency planning and preparedness guidance for State and local agencies. NRC and FEMA recognize the need for an integrated, coordinated approach to radiological emergency planning and preparedness by NRC licensees and State and local governments. NRC and FEMA will each, therefore, provide opportunity for the other agency to review and comment on such guidance (including interpretations of agreed joint guidance) prior to adoption as formal agency guidance.

F. Support for Document Management System

FEMA and NRC will each provide the other with continued access to those automatic data processing support systems which contain relevant emergency preparedness data.

² Per 10 CFR 50.54(s)(2)(ii), the Commission will determine whether the reactor shall be shut down or other appropriate enforcement actions if such conditions are not corrected within four months. The NRC is not limited by this provision of the rule, for, as stated in 10 CFR 50.54(s)(3), "Nothing in this paragraph shall be construed as limiting the authority of the Commission to take action under any other regulation or authority of the Commission or at any time other than that specified in this paragraph" (emphasis added).

purpose during the Cold War, but I think has long since outlived that military purpose.

Senator INHOFE. Thank you very much. That is a very good answer.

Just for a minute, could you describe some of the advantages of a sea-based system, and then we can kind of go into how we might be able to move toward that.

Secretary WOLFOWITZ. You always have to qualify these things by if it works, but if it worked, if we could develop the capability to intercept from the sea, I think there are at least three benefits that you get from it. I am sorry, I started to say advantages, but I think one needs to get away from the mind set that one system is better than another system.

In fact, one of the advantages of developing sea-based capability allows you to introduce another method of interception, another point at which you can intercept, another complication for any attacker, and so the more different things that work, the better off you are.

Number two, by being mobile and deployable you could locate it in a crisis situation closer to wherever the relevant threat is, and that, one could imagine, could be useful.

Finally, because it is mobile and could be located in a crisis situation, depending on where the crisis is, it might provide you with boost intercept capability, and I think of all the phases at which you would like to be able to intercept for reasons I said to Senator Akaka, boost phase is the place I would most like to be able to get things.

Senator INHOFE. I think you made that very clear. My time has expired. I did want to ask, if there is anything you would like to suggest to us? This is our fourth test. I believe the first one was successful. We had a couple that were not, and you have not really talked too much about what we are going to do next time, where do we go from here. Is there anything you want to share with us that you have not already?

General KADISH. Well, Senator, I think we are going to go—

Senator INHOFE. Maybe more sophisticated decoys?

General KADISH. A lot will depend on the internal data analyses to see if we want to proceed and replicate the same tests, and then we will be looking at complicating it, but those decisions will be taken over the next month and a half.

Senator INHOFE. Thank you very much.

Chairman LEVIN. Thank you, Senator Inhofe.

Senator Dayton.

Senator DAYTON. Thank you, Mr. Chairman.

Mr. Secretary, in a recent commentary in the *Washington Post*, you stated two of the most important conditions for success in building and deploying a missile defense system. I guess I would like to ask if you would agree that these would represent two of those important conditions for success. One, prove the technology before deployment, and second, that we reach agreements with Russia and other nations that ensure the defenses will increase rather than detract from global stability.

Secretary WOLFOWITZ. Well, certainly I agree with the general proposition that you want to prove technology before you deploy. As

General Kadish has said, there is always the judgment to be applied as to what level of demonstration you require to achieve a certain level of capability, but clearly there is no point in deploying things that do not work.

Second, I think the way you said it was reaching agreements with other nations to ensure that missile defense increases stability rather than decreases it. In that general way, I think I would agree, but I would certainly point out I do not expect to get Iraq or Iran or North Korea to agree to our deployment of ballistic missile defense.

I think some of the stability we would hope to achieve in the world is precisely from demonstrating to them that their large investments in their offensive missile capabilities will come to naught.

Senator DAYTON. Regarding Russia, and the pact we have with them, in your testimony today you indicate one of the possible violators of the ABM Treaty would be the systems integration test, which is scheduled for next February, and the treaty requires the 6-month notification if we are going to unilaterally withdraw from it.

So if I do the arithmetic, that says to me that if you determine through what your outlined procedure is today that this test will violate the ABM next February, by next month, August, the administration will have to notify Russia and the world of its intention to withdraw from the ABM Treaty. Is that the kind of timetable we are looking at here, respectively?

Secretary WOLFOWITZ. I believe these are a series of tests that we will be conducting. I do not believe we are going to have—if there were a determination that this is a treaty problem, I imagine we would just wait a little while. Is that the plan, General?

General KADISH. Yes, sir.

Secretary WOLFOWITZ. It is a series that begins next February. It is a series that raises issues. I do not think we consider that if it is a treaty issue, that we would proceed with that particular test, and force the issue by next February.

Senator DAYTON. There is another reference to the missile defense test bed, the construction beginning next spring, as another possible violation of the treaty, which again is going to require a 6-month notification, that would require that notification occur sometime in the fall. I guess without quibbling over a particular month or another, it seems that this reflects the kind of very accelerated timetable that this testing is proceeding under as it relates to the ABM Treaty, and I guess that leads into my question.

You reference the President's intention to meet with President Putin this week and have reciprocating visits, which I think is commendable. You also talked in your testimony last week about moving beyond the ABM Treaty and setting up this new agreement that reflects the new strategic framework.

In the history of arms control negotiations and agreements, I am not aware of any major agreement that has proceeded on the kind of accelerated timetable that this would require. I guess I am wondering, are you aware of such a timetable such as this having been met in the past, and if not, what makes you think it can be achieved this time?

Secretary WOLFOWITZ. Well, the history of arms control agreements are mostly these protracted negotiations between two heavily armed, essentially hostile adversaries, the United States and the Soviet Union, and you are right, those negotiations took forever. I participated in a lot of them, and it was reminiscent of root canal work, and we are certainly not going to reach an agreement early if we approach it in that way. But the premise on which we are proceeding is that Russia is not the Soviet Union.

This is not a potential adversary. It is, in fact, a country that we would like to bring into closer partnership with us. It is a potential friend, maybe even a potential ally, and I think that is the way we want to move forward.

I must say that if someone envisions a negotiation like the old ones with the Soviet Union, and that we will not in any way encounter constraints to the ABM Treaty during the time of a protracted negotiation like that, I think, Senator, that really is giving the Russians a veto over our program, and that is the dilemma we are caught in here.

I think everyone agrees we need to move forward in missile defense. We do not want to give the Russians a veto. I think everyone agrees also we would like to achieve a cooperative outcome, and I think that forces a fairly rapid schedule.

I would emphasize, too, though I hope this is not where we end up, that even in the worst case if we say these are important things we have to proceed with them. If we do not yet have an agreement but we need to withdraw, that certainly should not be the end of negotiations. In fact, most of the negotiations that you refer to did not begin from a treaty. They began from an American program. In fact, the ABM Treaty itself grew out of a vote in this body to move forward with a Safeguard ABM system.

Senator DAYTON. I would agree with you, Mr. Secretary, that we certainly do not want to give Russia a veto. On the other hand, what seemed to be an agreement that the improvement, or at least the retention of global stability is the sine qua non in this arrangement, so as you say, you are in a delicate situation. It would seem that if the actions diplomatically of this administration are such that they cause Russia to respond adversarially, rather than cooperatively, that would seriously undermine even the military's intent of this undertaking.

Secretary WOLFOWITZ. That is a fair point, Senator, but we are doing more than trying to achieve an agreement with the Russians. We are doing a lot of things that they can observe, and I think ought to discourage them from any kind of precipitous or dangerous reaction. I come back to what I think is really very fundamental, and that is the reductions in our own offensive nuclear forces.

We are already taking some without any protracted negotiations. We did not even negotiate a week to remove 50 MIRV'd MX missiles from our force, nor to remove four Trident submarines, with nearly 800 nuclear warheads. We are taking more than 1,000 nuclear warheads out of our force with this budget alone, and it did not take a week of negotiations with the Russians.

I mean, you go back 10 years, when the previous President Bush, and I believe it was September—I think it was even September 27

of 1991—announced that we were going to make major reductions in both our tactical nuclear forces and our strategic nuclear forces, and that we hoped the Russians would reciprocate, within 10 days and no negotiations. No first-class tickets to Geneva, not even any coach tickets to Geneva, yet within 10 days President Yeltsin and President Gorbachev, who was still the president at the time, responded positively.

We did more arms control in those 10 days than in 20 years of negotiating with the old Soviet Union, so I think it really is a different era, and we have a different view of Russia. I hope they realize that we have a different view of them, and I hope they have a different view of the United States.

Senator DAYTON. That is a very good point, sir, and I wish you success with that undertaking.

My time has expired. Thank you, Mr. Chairman.

Chairman LEVIN. Thank you very much, Senator Dayton.

Senator Sessions.

Senator SESSIONS. Thank you, Mr. Chairman. With regard to the treaty, I do salute you and the President and others for the consistent message you have sent to the world that we want to work and be responsive and listen and cooperate, but we do have a primary responsibility, which is to defend the United States from missile attack, which you just noted we have no defense for whatsoever.

We also know that more and more nations are developing a missile attack system with the capability of reaching the United States, and I am glad, Secretary Wolfowitz, that you are there, having served on the bipartisan commission that evaluated this problem and reached the conclusion that we did need to deploy a national missile defense system, before you became Assistant Secretary of Defense.

One of the objections that has been raised is that there has been this huge increase in spending on national missile defense. There has been a 56-percent increase in spending for ballistic missile defense. I believe that refers primarily to going from President Clinton's \$5 billion that he planned to spend on ballistic missile defense to \$8 billion that this administration proposes in its new budget.

I would like to talk about those numbers a little bit. Under the numbers as I calculate them, President Bush in his defense budget, including the supplemental this year, has proposed a \$38 billion increase in defense over the last year's budget, and that is a significant increase for sure, but it does show that the \$3 billion increase that is alleged here is not as big as some would say.

I would like to ask a little further, General Kadish, of the \$3-billion increase from \$5 billion to \$8 billion that is being proposed here. A lot of that is involved with other missile systems that many on this committee strongly support, like the Patriot and the THAAD, the theater missile defense that has been going on for years.

Can you tell us pretty much where the numbers come out there, how much of that \$3 billion is not in ballistic missile defense, but in the theater and the Patriot-type missiles that all of us agree need to be built?

General KADISH. Senator, I would like to get you the exact figures for the record, but as I recall, all but about \$800 million to

\$1 billion of it is in the theater, or dual-use type of systems, but I would like to be precise and answer the question for the record. [The information referred to follows:]

In the previous construct of shorter-range theater missile defense and longer-range missile defense, the following budgets are requested. All funds are requested in BMDO's budget except where noted. Programs marked with an asterisk are split evenly between the two categories as their efforts apply to both.

FISCAL YEAR 2002 AMENDED BUDGET REQUEST

[In millions of dollars]

	Short and Medium Range	Long Range
Patriot Advanced Capability -3	1 784	
Medium Extended Air Defense System	174	
Navy Area	2 395	
Ground Based Terminal (THAAD)	923	
Arrow	66	
Ground Based Midcourse	3,285	
Sea-Based Midcourse (NIW)	596	60
Space-Based Kinetic Boost	105	
Airborne Laser *	205	205
Space-Based Laser project *	85	85
SBIRS-L *	210	210
Advanced Technology *	56	57
International programs *	38	37
Systems Engineering *	410	411
Total	3,842	4,455

¹ In Army budget.

² In Navy budget.

Senator SESSIONS. So we are really talking about, in terms of ballistic missile defense, no more than half of the \$3 billion, maybe less, actually going into the development of a Ballistic Missile Defense program.

General KADISH. Under the old definitions, that is heading in the right direction. We are trying to define this as a system now, a layered system.

Senator SESSIONS. I know you see it correctly as one system and not a series of systems, but many here say, well, we approved theater, we approved Patriot, but we do not approve ballistic. When you look at those numbers, that is not much, when you take \$1.5 billion out of the \$30 billion increase President Bush has proposed, we are talking about 5 percent or less of his increase going to missile defense, and that is not reckless spending, in my view. Am I far wrong from that, Secretary Wolfowitz? Do you see it that way?

Secretary WOLFOWITZ. I see it that way, and we can try to get you precise numbers.

I do know that just the PAC-3 increase alone is \$750 million, the Navy area-wide is \$396 million, so that is \$1.3 billion that is exclusively for shorter-range systems. We are trying to get away from this national and theater, but there is shorter-range and longer-range.

I think to understand precisely what General Kadish said a few minutes ago, there is a large chunk of it that is applicable to short, intermediate, and long-range. You can improve better radars, you have Airborne Lasers, there are a whole variety of things that will intercept missiles of a variety of ranges, so I think it is probably

roughly correct that there is between \$1 and \$2 billion that is exclusively for shorter-range, including two programs I mentioned, and between \$1 and \$2 billion that is exclusively for longer range, and the rest is dual applicable. I can get you the exact numbers.

Senator SESSIONS. That would represent less than 1 percent of the total defense budget of \$300-plus billion.

Secretary WOLFOWITZ. \$1 billion would be one-third of 1 percent.

Senator SESSIONS. As you had concluded, the President and Secretary of Defense, and really the President announced it during the campaign, that he considered having a national defense system to be a national priority.

Secretary WOLFOWITZ. It is, Senator, and it is a defense priority. The threats that we are talking about, if they were effective and we had no ability to cope with them, could render all of the rest of our investment in defense capabilities useless, and that is why hostile countries, I think, are investing so much money in their own offensive capabilities.

Senator SESSIONS. So hostile countries are investing in attack missiles, missiles that eventually, as they improve them, can reach the United States, and oddly, they are the ones that are opposed to us building a national missile defense, and our allies, Israel and Taiwan and Japan and other countries, are very interested and supportive, or at least are interested and generally supportive of what we are doing, is that not correct?

Secretary WOLFOWITZ. I think you find, Senator, the closer they are to the threat, the more supportive they are.

Senator SESSIONS. Well, I am not surprised that nations like some of our adversaries would be opposed to this, because we would be denying them a capability of intimidation and even attack that they presently think they can have in the years to come.

My time is up. I just would like to say that I thank you for the courage to confront this issue openly and talk about it plainly, and to recognize that the treaty does contemplate completely that we would not have a national missile defense system. There is no need to try gimmicks to get around it. Let us confront it. Let us work with the Russians and our European allies and others, and see if we cannot improve, and establish a way to get around that, and build what we need to build for America.

Thank you for your work.

Secretary WOLFOWITZ. Thank you, Senator.

Chairman LEVIN. Thank you, Senator Sessions.

Senator Nelson.

Senator BEN NELSON. Thank you, Mr. Chairman. First, I want to thank the Secretary and the General for being here today and to extend my congratulations on a successful test.

Mr. Secretary, I would like to get your take on the Russia-China agreement that was just announced during the last day or so regarding either the ABM Treaty or an ABM Treaty. Is there any authority for them to do that, for Russia to do this under the existing treaty, to add unilaterally, or is this a separate treaty arrangement without regard to our treaty with the former Soviet Union and others?

I guess the question really is, is this sort of a tacit or de facto veto of what we are attempting to do with the missile defense sys-

tem as it relates to our treaty with the former Soviet Union, which is in question, and finally, were we aware that this was going to this treaty, or that this agreement, if not a treaty, between Russia and China was imminent?

Secretary WOLFOWITZ. Senator, we were definitely aware they were likely to sign a treaty of friendship during this meeting. I have to confess I have not yet seen it, and I do not know that we have the exact text of what they have signed.

Senator BEN NELSON. But it is outside of the agreement that we have with the former Soviet Union which is in question.

Secretary WOLFOWITZ. Well, I think it has no direct bearing on the ABM Treaty. I think what it does indicate is, at least if one thinks about what the Russians are doing here, first of all, they have a 12,000 mile border with China, and they have good reason to try to have good relations with that country.

Second, we know that in relationships like this, countries try to use their relationship with another country to try to get some leverage in another negotiation, and this clearly is intended to get some leverage with us, and we know outside of that arrangement, and frankly much more disturbing, that the Russians are selling a number of military systems to China that some day I think they may come to regret.

There is no direct connection to the ABM Treaty, and I think we can reach the kind of understanding we are hoping to reach with the Russians consistent with their having a treaty of friendship with China.

Senator BEN NELSON. So you do not see this as a de facto veto of our efforts to move forward without regard to an agreement with Russia.

Secretary WOLFOWITZ. I do not think it is a veto. I think it probably is, among other things, intended by the Russians to give them more negotiating leverage, but it certainly does not give them a veto.

Senator BEN NELSON. At least it may be in part sending a message.

Secretary WOLFOWITZ. It may be, yes.

Senator BEN NELSON. I want to thank you for your patience, or at least your appearance of patience. When I keep trying to bore in on some definitional things so I know whether we are moving from development to deployment, I am really trying to figure out whether there is a difference, or if it is a matter of shades of gray.

I get a little concerned when we begin to lump all defense systems together—theater as well as intercontinental—as layered, because I am not sure where one shade of gray begins and the other ends. Maybe that is the fair way to do it, but it is a harder way for a person such as myself to analyze where we are, and I was taken by General Kadish's comment that there is a long road ahead.

At least on a road, if I am looking at a map, I know from point A to point B the points in between. I cannot determine for myself right now the points in between from development to deployment. Sometimes I think we are definitionally encumbered here, and it makes it more difficult for somebody such as myself. Is it a definitional difference, or is there a real difference?

I need to know whether Fort Greely is a test bed becoming an operational facility, not whether the decision has been made to do that, but is it a very short step? Is it a very short shade of gray difference from being a test bed to an operational entity? That is what I am really trying to get my arms around as we go through this.

I applaud the test. I think it was exceptional that it was successful, but I am still concerned about not knowing the difference between development and deployment.

Secretary WOLFOWITZ. Well, we can come to the treaty part of it, or try to, if you like, in a minute, but I think the important thing, when we are engaged in a weapons system development for us, and the General can elaborate on this, there is a very important difference between the development stage and the deployment stage, and there are very important hurdles you have to cross to get to the point of a deployment.

When you do a deployment you have multiyear plans for how you are going to spend the money and what the total system is going to look like at the end, whereas when you are doing development, by definition, you are feeling your way. You do one test to see where you go with the next test.

Senator BEN NELSON. Is that correct? Excuse me. Is that pretty much where we are right now with this missile defense system?

Secretary WOLFOWITZ. It is, but I think if I take an example from a different arena, maybe you will realize that it is not an effort to be obscure that is causing the obscurity here.

We had a system in development called Joint Surveillance and Target Attack Radar System (JSTARS), which gave us this remarkable ability to track moving vehicles on the ground, and we had no deployment plans for it. It was not far enough along. It had not been proven out.

Then suddenly, Saddam Hussein invaded Kuwait, and we needed emergency capability to track vehicles on the ground, and the decision was made that even though JSTARS had not met the requirements that we would normally impose to do a multiyear procurement to send it to a war, we sent it to a war, and it had a great deal of operational capability.

Senator BEN NELSON. In a theater layer.

Secretary WOLFOWITZ. What we are talking about in Alaska is something like that. It is a test bed. It will be used to improve our knowledge of how the system works, but it is a test bed designed with the thought in mind that if it works as well as we hope it will work, it could have a rudimentary operational capability.

Senator BEN NELSON. So the theater capability we are looking at right now from this test bed could develop into intercontinental capacity, is that fair to say?

Secretary WOLFOWITZ. I would put it just slightly differently, but I think the idea is the same, that this developmental capability could become, with very little modification, an operational capability.

Senator BEN NELSON. My time has expired. Thank you very much. I appreciate you both being here.

Chairman LEVIN. Thank you, Senator Nelson.

Senator Bunning.

Senator BUNNING. First of all, I would like to ask that my opening statement be put into the record.

Chairman LEVIN. It will be.

[The prepared statement of Senator Bunning follows:]

PREPARED STATEMENT BY SENATOR JIM BUNNING

Thank you, Mr. Chairman. Gentlemen, thank you for appearing before us again. I would like to begin by congratulating you on a successful test this last weekend.

The defense of our Nation from all kinds of threats is the most important responsibility of government. Ballistic missiles, and the weapons they carry, contain a threat of destruction so terrible that ballistic missile defense must be our first priority in protecting this Nation.

During the 1980s when President Reagan wanted to deploy intermediate range ballistic missiles in Europe, many resisted, believing that it would be provocative to the Soviet Union. The result, as we all know, was that we were able to convince the Soviets to remove all of their intermediate range missiles, in exchange for removing ours.

The world is very different today than it was then. Russia is not our enemy, and we are not proposing to deploy an offensive system, as President Reagan did. We are going to deploy a defensive system, that will protect our citizens from the threat of a rogue nation or of an accidental launch.

Our missile defense system will not threaten the Russian's strategic capabilities. Once they know that to be true, they will accept our program, and perhaps wish to work with us to establish their own. The only people who should be upset by our defensive shield, are those who might one day wish to threaten us with their missiles.

It is important to remember that arms control treaties exist because they improve the security of both parties to that treaty. When the strategic situation changes, as it has since the end of the Cold War, and those treaties hinder security rather than strengthen it, then they serve no further purpose. This is clearly the case with the ABM Treaty.

Gentlemen, I realize that we have a long way to go to protect our country from this threat, but we will never get there unless we continue to press forward.

Senator BUNNING. I congratulate you, General and Mr. Secretary, for the successful test that we had last Saturday. It is a step in the right direction, obviously. To succeed is better than failing, and to move one step forward in the missile defense program is very important at this point in time.

A question for Secretary Wolfowitz. Russia is actually located a lot closer to a large number of countries that are developing ballistic missile technology. They are closer than we are. It would seem to me that the threat to their nation is at least as great as the threat to ours. If that is the case, then it would seem to be in their national interest to develop national missile defense also. Do you feel that a limited national missile defense is in Russia's national interest, as well as ours?

Secretary WOLFOWITZ. I do absolutely, Senator, and if you will indulge me for a minute, we had talks with the Russians 9 years ago. In the summer of 1992 Dennis Ross led a delegation to Moscow and met with Foreign Minister Mamyedov. One of the things they addressed specifically was the situation of the threat of third countries to both of us, and the impression our people had at the time was that there was a great deal of Russian interest in the possible danger to themselves from these capabilities, and at one point in the discussions, the subject came up.

The Russian side said, well, what would you Americans do if you had a missile defense capability in space and one of these third countries launched a missile at us, and the American side said, well, if we could, we would shoot it down, and this was the moment

at which people were falling asleep in this hot room, and they suddenly woke up. The Russians were, I think, quite surprised, pleasantly surprised that in this new world we would see a threat to them from third countries as something we would like to help them defend against.

We talk about a new strategic framework with Russia. We do not just mean amendments to the ABM Treaty, we mean a different kind of approach to the whole subject. I think it would include, Senator, along the lines of your question, every effort to work cooperatively on improving missile defenses, because it is not in the interest of the United States—and let me repeat this—it is not in the interest of the United States or Russia to be vulnerable to limited missile attack from any direction. I do not believe it is in the interest of Russia for the United States to be vulnerable to limited missile attack. I believe that we have more to do working together to cooperate in dealing with that than in trying to work around the edges of a 1972 treaty between two hostile adversaries.

Senator BUNNING. I would like to follow up. Would you characterize the fiscal year 2002 testing program as being the first step in developing a missile defense system that is more concerned about being successful than being in compliance with an outdated treaty from 1972 which does not take into account modern threats?

Secretary WOLFOWITZ. I think this is the first time that the Secretary of Defense—and General Kadish I guess should be the witness here—when Secretary of Defense Rumsfeld said, I want you to develop the best possible development program to move as rapidly as we can to explore these technologies and be in a position to deploy. Do not worry about the ABM Treaty. If there are ABM Treaty issues, you through your compliance review group will bring them to me, but I will resolve them. I think that was the first time you had that guidance, is that not correct, General?

General KADISH. Certainly during my tenure, yes.

Senator BUNNING. Let me ask the General a follow-up, then. The Clinton administration designed its ballistic missile program around the goal of ensuring compliance with the ABM Treaty. As a result, it only pursued technologies that would not violate the treaty, rather than pursuing technologies that had the best chance of working.

Unlike the previous administration, I actually want to see a missile defense system that works. The current RDT&E program pursues a number of different technologies that the previous administration did not. Do you believe that the structure of the current program provides the most likely chance of developing a system, or a group of systems that can actually defend the American people?

General KADISH. I do, Senator, and that is the basic thrust of the multilayered system approach, because we have to consider mobile systems, sea-based and others, in order to achieve that, which do have treaty implications.

Secretary WOLFOWITZ. Senator, in fairness, the last administration did submit in its last budget a request for money for the Shemya radar, which, as a matter of fact, would have been a violation of the ABM Treaty. They were prepared at least in that area to move forward, but I think constrained the program artificially with a variety of technologies that General Kadish is pursuing that

I think were kept off of the table because of their treaty implications.

Senator BUNNING. One last question. It is about the ground-based interceptors and radars in Alaska. Please, please explain to me—and I know you have tried to explain to many others—the advantage gained for the program by that placement. I mean, is it specifically to counter North Korea, or is it specifically to develop and test the technology?

Secretary WOLFOWITZ. Let me try, since I am not the technician, and then the technician can correct it, but as I have understood the explanations, and it made sense to me, in order to move beyond kind of rudimentary capability that was demonstrated in the test Saturday night that you saw the film strip on, in order to begin to introduce the sort of real-world complications that I think Senator Akaka referred to with multiple decoys and multiple angles, longer ranges, in other words, in order to be more realistic, you need a different test bed, a more dispersed test bed.

Alaska allows us that geometry. It also puts it in a place where that test bed will ultimately begin to be the basis of an operational capability, and it is a philosophy of, if we are going to spend this much money on a test bed, let us have it be in a place where it could also become operational, rather than deliberately put it somewhere where it cannot be operational, and then have to reproduce that whole expenditure somewhere else.

General KADISH. I would agree wholeheartedly with that. That is exactly why we chose to do it this way. Instead of building it twice, we build it once, basically.

Senator BUNNING. My time has expired. I want to thank you both for your straightforward answers, and Godspeed.

Chairman LEVIN. Senator Cleland.

Senator CLELAND. Mr. Secretary, are you on track for deploying a national missile defense system by 2004?

Secretary WOLFOWITZ. Senator, I am not sure what on-track means, and you may not have been here when General Kadish explained, with this test bed in Alaska, if things worked well we would have expect to have in the time frame 2004 to 2006 some rudimentary capability to set up an operational system, but it is rudimentary. It is not something I would call a national missile defense system. It is not a long-term procurement.

Senator CLELAND. Will that violate the ABM Treaty?

Secretary WOLFOWITZ. That would surely violate the ABM Treaty.

Senator CLELAND. How much will that system cost?

Secretary WOLFOWITZ. What is the test bed, General?

General KADISH. The test bed itself, or a larger system?

Senator CLELAND. How much will this system, this rudimentary system deployed between 2004 and 2006, that violates the ABM Treaty, how much will it cost?

General KADISH. I would like to be precise for the record, but as I remember the number, the physical emplacement of the test bed is about \$750 million out of the budget for the development program.

[The information referred to follows:]

The 2004 RDT&E test bed provides a development test bed consisting of an upgraded Cobra Dane radar in Alaska as a surrogate for the planned Upgraded Early Warning Radar (UEWR) capability, initial In-Flight Interceptor Communications System (IFICS), and Battle Management Command Control and Communications (BMC³) capability, five silos, Command Launch Equipment (CLE), and software upgrades. Up to five ground-based interceptors using the Payload Launch Vehicle Plus (PLV+) booster, which is comprised of the current test configuration booster plus a Minuteman (MM) II first stage, could be installed expeditiously to provide a contingency defense if needed in the fiscal year 2004 to 2006 timeframe.

In fiscal year 2002, BMDO is developing the test bed with RDT&E funding exclusively.

- Total fiscal year 2002 = \$786.485 million

Major Fiscal Year 2002 Test Bed Activities include:

- Initiate development of five PLV+ interceptors (\$305.444 million)
- Initiate upgrades to Cobra Dane radar (\$55.000 million)
- Execute test program (\$98.500 million)
- Initiate Kodiak Island target/interceptor launch facility modifications (\$21.700 million)
- Kwajalein Missile Range upgrades (\$6.000 million)
- Accelerate BMC³ development and installation (\$17.020 million)
- Initiate facility construction activities at Fort Greely (\$273.121 million)
- Efforts to mitigate community impacts at Fort Greely (\$9.700 million)

Senator CLELAND. I am not talking about the development program. I am talking about the total system here that you are going to deploy that will violate the ABM Treaty, that you are going to deploy this rudimentary system between 2004 and 2006. You cannot tell me it is going to cost just \$750 million.

Secretary WOLFOWITZ. Senator, that is why it is a very rudimentary capability. If you wanted to turn it into a full national missile defense capability, it would be more money, more time, and a whole different set of decisions.

Senator CLELAND. We are spending \$3 billion just to test out this rudimentary system here. Next year, it will be more money, and the year after that. I mean, what is the total cost of the system, to deploy it, that will violate the ABM Treaty? Do you know?

General KADISH. I would have to get the actual number. I do not know off the top of my head, but the number was in 2002 not the total cost, nor the life cycle, nor any of the other ways we defined it that I just referred to.

Senator CLELAND. It seems like before we walk down this road here over the next 4 or 5 years, we ought to have a sense of the total cost of the system. Can either one of you share that with us?

Secretary WOLFOWITZ. We will get you something for the record, Senator.

Senator CLELAND. You do not know now?

Secretary WOLFOWITZ. I do not know the outyear cost.

Senator CLELAND. Well, I think the costs are obvious. As to the fall-out from what this effort will do in violating the ABM Treaty, the fall-out has already produced an amazing picture.

We have driven the Russians and the Chinese into the arms of one another. According to the *New York Times* the Russians and the Chinese joined to oppose a missile shield for the U.S., and one Russian commentator pointed out that it was, "an act of friendship against America".

It was a chilling picture for me, because the last act of friendship between Russia and China against America they got involved with, I was a part of. It was called the Vietnam War, and I almost got

killed by a Russian 122 millimeter rocket in 1968, and so this is a chilling photograph for me. I think it should be chilling for all of us to understand the impact of what we are doing here. We have a cost associated with this effort, and this is just phase 1, if you might want to indicate it, of that cost.

Politically, I think it makes the world less secure, and it is painfully obvious what the Russians are going to do. Two years ago I sat in a meeting with Senator Levin and Senator Lugar, one of the authors of the Nunn-Lugar program which this administration is underfunding by over \$100 million, I might add, and sat in the presence of the former director of the Russian rocket forces, and 2 years ago he told us that if you deploy a national missile defense system, we will not build more rockets, we will just MIRV our warheads. We will go from 8 warheads per missile to 12.

I think that makes the world less secure. It is painfully obvious that the Chinese, not only with this friendship pact with the Russians, but they are going to go on their own and build more missiles. It seems to me that makes the world less secure, so I think there is a price exacted here, whatever the actual total in dollars to us.

Now, in testimony last Thursday, General Kadish stated that your missile defense proposal has no milestones by which to measure progress. At the Frontier Institute last Friday, Secretary Rumsfeld said, "We do not have a proposed architecture. All we have is a series of very interesting research and development and testing programs".

In fiscal year 2001, the entire Department of Defense budget is \$9 billion for basic research and development, \$9 billion for basic research and development in all of DOD. You are now proposing to spend \$8 billion on missile defense research and development alone. How can you, Mr. Secretary, justify spending \$8 billion on missile defense if you have no milestones, requirements, or architecture in mind? If you do not know where you are going, how can you know what it will cost?

Secretary WOLFOWITZ. I think that is the essence of development programs. We are not setting up an architecture until we know what we can do. We do not think we should spend enormous amounts of money on architectures until the technology has been proven. We are pursuing a great deal of research and development, and we think the total in this year's budget is \$47 billion, of which this is a very important piece.

I do not know if you were in the room when the subject was discussed. A good deal of that \$8 billion you referred to is either exclusively theater missile defense or dual use, theater and long-range missile defense. The portion that is exclusively for long-range missile defense is a very small fraction of that \$8 billion, and I think a very necessary fraction.

General KADISH. Senator, I might add that when we referred to specific major defense procurement milestones, it is true we do not have those right now, but that does not mean that we do not have plans, and we are developing criteria to move forward on a very disciplined way on a development program. We do and will have those. How they lead to specific procurement and deployment milestones, however is yet to be determined.

Senator CLELAND. My time is up, but the Chiefs have identified some \$32 billion in unfunded requirements, and part of that is still making up the precision weapons inventory that we expended more on.

Thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Cleland.

Senator Allard.

Senator ALLARD. Thank you, Mr. Chairman, and I would first of all like to thank the Ranking Republican, Senator Warner, for his comments at the start of the hearing, and I would also like to congratulate General Kadish and everyone who was involved on what appears to be a very successful Saturday evening.

I know you were all under a great deal of pressure, and I can think back 2 years ago where you had a failure due to a fogging over of the optical system from the cooling equipment. It seems to me you learned something from that, and the last failure we had here, where you had a failure of a system we have been using over and over. It just proved to us again we are dealing with a machine, and even the best designed machines sometimes surprise you.

As you indicated in your comments, this is a long journey. It is step-by-step, but at least I am pleased that we completed the steps still standing up, and I think that if this had been a failure we probably would have had a great deal more attendance at this committee meeting today, so I want to congratulate you on where you stepped forward this last weekend.

During Thursday's hearing, I had a question regarding the test, and the ABM compliance review, and I stated that the compliance review group certified a test on June 30, 2000, and I believe I made a misstatement in that I said the test itself took place on June 8 of 2000. I want to correct that for the record, because the certification actually took place on June 30, with the test taking place on July 8, and so then I want to restate my question for the record.

Does the process to determine the compliance of program activities during this budget cycle differ significantly from the process used in past years?

Secretary WOLFOWITZ. I believe it does, Senator, in that in past years they would assess events, and frequently sort of go down to the wire back and forth with the developers, and the fundamental premise was, if anything was ultimately decided to violate the ABM Treaty, they would not do it.

Since then we have told General Kadish to proceed differently, to proceed with the most aggressive possible development, and that means we have asked them to surface compliance issues much earlier in the process. So we are trying now to change the process so instead of last-minute determinations we get notification well in advance of 6 months of the actual event.

Senator ALLARD. So in other words, have we deviated from the same budget process as the compliance vetting procedures, as we have done in the past?

Secretary WOLFOWITZ. No, we have not.

Senator ALLARD. That is the question.

Secretary WOLFOWITZ. No. We are applying the same compliance standards. We are just trying to apply them much earlier, because we realize that we are consciously in a zone where we—

Senator ALLARD. You are bringing it up appropriately for discussion.

Secretary WOLFOWITZ. Correct.

Senator ALLARD. But then your fiscal year budget for 1999, and the fiscal year budget for the year 2000 budget request, that was not certified by the compliance review group before the President submitted it, was it?

Secretary WOLFOWITZ. I do not believe any of the previous budgets were, and the budget for last year included an event that I do not think anybody disputes would be a treaty-violating event, and that would have been the construction of the radar in Shemya in Alaska, which we decided not to proceed with.

Senator ALLARD. Thank you. It has been suggested that because the Department of Defense cannot say for certain now whether the testing activities you plan are compliant with the ABM Treaty the Senate cannot approve the budget, but my understanding is that compliance determinations are almost never made well in advance of a test or other activity, and that it is virtually impossible to do so because the plans often change right up to the time of the test.

Now, my question is, is that a fair description, characterization of the process?

Secretary WOLFOWITZ. Senator, that is a fair description of the process, and obviously if you get within the 6-month limit and you are under the treaty, it is law and we will follow it, and therefore, if at the last minute we discover a compliance problem we will fix the event to comply, but we have simply for the first time now tried to make sure the compliance process surfaces these problems earlier, and as I pointed out, and I do not mind repeating it, last year's budget included events that would have been judged to be noncompliant, and there was never an issue about that.

Senator ALLARD. General Kadish, your organization prepared information for another Senator not on this committee regarding compliance determinations for various tests that have occurred over the years, and I would like to highlight some of those for the record.

For example, you conducted integrated flight test 1, or IFT-1, which was the first test of the exoatmospheric kill vehicle, on January 16, 1997, but compliance was not certified until December 20, 1996.

Another example, you pointed out the technical critical measurements program, or TCMP flight 2A, was not certified until September 14—I mean, February 14, 1996, just 8 days before it occurred.

Also, the risk reduction flight test 1 for what was then the National Missile Defense Program was certified 3 days before it occurred in 1997, and then a second risk reduction flight was certified just 2 days before it was conducted a month later.

Another example is the test of the NMD prototype radar was not certified until August 31, 1998, less than 3 weeks before it occurred.

The first test of the Navy theater-wide missile was certified November 2, 1999, for a November 20 flight. The IFT number 3 for the national missile defense system, which was the first successful intercept attempt, was certified on September 28, 1999, just 4 days before the test.

The IFT 4 was certified 12 days before the test took place on January 18, 2000.

The certification IFT 5 was issued 8 days before that test last summer, but the certification actually had to be modified on July 7, the day before the test, because of changes in the test plan.

Is it not the case that the certification for Saturday night's test was also modified 1 day before, on Friday, July 13, because of changes in the test plan, and I would like to follow that first question up with a second question. It seems, then, it is not unusual at all to be uncertain about whether a planned test activity conflicts with the ABM Treaty until shortly before the test occurs. Would you agree with that?

General KADISH. I would agree with that, Senator. Under the process we have been using, and I believe those dates are correct, I would have to check them in detail, but even the Saturday's flight had a modification, as you pointed out.

[The information follows:]

The first Navy Theater Wide Control Test Vehicle Test was certified September 3, 1997, for a September 26, 1997, flight.

IFT 4 was certified 12 days before the test took place on January 18, 2000, and was modified on January 14, 2000, because of changes in the test plan.

Senator ALLARD. I hope I have stated those situations correctly. If for some reason we disagree, let me know, and I will correct it for the record.

I want to thank you for the response, Mr. Chairman. I see my time has expired.

Chairman LEVIN. Thank you, Senator Allard. Senator Reed.

Senator REED. Thank you, Mr. Chairman. General Kadish, congratulations on your successful intercept over the weekend.

Mr. Secretary, if I could pursue for a moment a response you gave to Senator Allard with respect to compliance immediately prior to a test event. You said that if at that late period it was non-compliant, in your words you would fix the event to comply. Is that your approach to all of these potential tests going forward, that you would endeavor to fix the event to comply in all cases?

Secretary WOLFOWITZ. If you are under the ABM Treaty you have no choice, and in fact, frankly, it is not the right way to go about optimally pursuing a development program. It means that you come up with something you say may be the optimal test program, and the lawyers say, whoops, it does not comply, and you have to drop it. That is why we are trying to alert the senior decisionmakers early, and well in advance of 6 months before the event, if we think we see something that will definitely raise a compliance issue. But once you are within that 6-month window, if you are still within the treaty, then you have no choice.

Senator REED. You could fix the test to comply, you could violate the treaty, or you could simply postpone the test for 6 months plus a day. Those to me are the three options.

Secretary WOLFOWITZ. We have ruled out violating the treaty.

Senator REED. So as we go forward, the real choice you will have when these events are scheduled and you discover they are non-compliant, or you think they are noncompliant, is to fix it or to postpone the event, or announce you are withdrawing from the treaty.

Secretary WOLFOWITZ. I think that is correct.

Senator REED. Thank you.

General Kadish, last year I understand the Defense Department canceled the Navy theater-wide block 1 program in order to pursue the more capable block 2 variant. I gather the decision was driven not only by technical shortcomings with block 1, but because the planned quantity of 40 block 1 ships and Navy block 1 missiles was insufficient. The proposed budget we are discussing today asked for \$410 million in the 2002 budget for Navy theater-wide, yet this effort is apparently focused once again on deploying a block 1 version of the system. Could you explain the funding? Will it go to block 1 and, if so, why, since there apparently was a decision previously to step away from that system.

General KADISH. Well, Senator Reed, to the best of my knowledge there was no formal decision to step away from Navy theater block 1. There was an analysis that we did under the approach of where we were trying to do procurement and development at the same time, that it might be more economical and beneficial to go beyond block 1 in that framework.

Now, under this layered approach that we are pursuing for these classes of missiles, the development of the block 1 and the completion of the intercept program that underlies that is certainly a viable part of our development program, and we want to aggressively pursue that. It does not mean that we will actually procure these types of systems. It depends on the development program and the results of the test.

Senator REED. But you are pursuing block one for the potential deployment, for a potential deployment?

General KADISH. To the degree that the Aegis interceptor program represents a block 1, we are, and I know I cut that fine, but that is an important distinction.

Senator REED. That is not only fine, that is metaphysical, I guess. Is it fair to say, though, that there were technical questions raised about the capability of the system, and also a question raised about the availability of sufficient platforms that could force you to seriously reevaluate block 1 last year that now you are aggressively moving toward a block 1 potential deployment?

General KADISH. Both of those cases we are pursuing are test programs, and what I am saying is, the decision to pursue that from a procurement program will not be taken until we get sufficient test data.

Senator REED. Let me move to the THAAD system, which is a system, I believe, that has great potential, and I am strongly supportive of. It is a fundamentally sound system, I believe, but it is plagued by tests which some people ascribe to a mentality that puts the schedule ahead of really looking at quality control and important fundamentals.

Last year, I understand the Defense Department considered accelerating THAAD but decided not to, since it felt the program was at a prudent pace, with acceptable technical risk. Again, the proposed budget adds \$224 million to THAAD's program for 2002 for program acceleration. Once again, are we in a situation where experience told us to slow down, but politics are telling us to speed up?

General KADISH. No, Senator. In that particular case the money to "accelerate THAAD" is designed to buy more test hardware early on and take a risk that we will be successful.

We do not intend to change the structure of our current program from a very risk-handling approach, where we are very deliberate on ground tests and on redesign of THAAD, but instead provide the money to more aggressively test the program, and take the idea that should it be successful we would have test assets to actually put in an emergency situation, and thereby accelerate that capability if we should deem it capable. There is no intent to speed up or eliminate or cut corners in that program, and that is something that I am going to watch very carefully that we do not do across a broad spectrum. We cannot afford it.

Senator REED. SBIRS-Low is being transferred from the Air Force responsibility to your responsibility. The current estimate of life cycle cost, about \$20 billion or so. That is an estimate, and also you have indicated how critical it is to your national missile defense plans. Do you have a good idea at this point of how much SBIRS-Low will cost?

General KADISH. We have a generalized estimate, as you point out, that varies to some degree up to \$20 billion. I think we have to get through the next few years of the competition and design activity to really nail that down, and so I think we are 18 months to 2 years out from really understanding what the long-term cost will be, and then it would only be an estimate, based on where we are.

Senator REED. My time has expired. Thank you, Mr. Secretary. Thank you, General.

Chairman LEVIN. Thank you, Senator Reed.

Senator COLLINS.

Senator COLLINS. Mr. Secretary, you testified that the administration is pursuing two parallel tracks, that first you are pursuing an accelerated research and development and testing program, and second, the administration is engaged in discussions with Russia on a new security framework. If the Senate were to significantly reduce the money in this budget for missile defense, what would be the impact on the President's attempts to achieve a new strategic framework with Russia? Would it lessen the chances of success in your judgment?

Secretary WOLFOWITZ. Senator, I think it would lessen it substantially, because I do think our ability to reach an understanding with Russia is going to depend in considerable part on their sense that we are moving forward. We are ready to move forward together. We would like to do it in a way that is cooperative, but if they feel that if they drag their feet we will not move forward at all, they might well prefer to drag their feet.

Senator COLLINS. Thank you.

Mr. Secretary, Senator Inhofe raised a common criticism of missile defense that I want to pursue further with you. Critics of missile defense repeatedly contend that the United States faces a far greater threat from the so-called suitcase terrorist than from ballistic missile attacks from a rogue nation.

It is my understanding that last year the United States spent about \$11 billion on counterterrorism programs, and that this is

about twice the amount that was dedicated to pursuing missile defense. Is the administration continuing a significant investment in counterterrorism programs while continuing the accelerated research and development of missile defense?

In other words, is this not a false choice, and in fact we are pursuing aggressively counterterrorism measures while pursuing the research for our missile defense?

Secretary WOLFOWITZ. I think it is, Senator, and I do not have a sufficiently good crystal ball to say which is the more likely one, and frankly, I have spoken to a lot of intelligence analysts. I do not think their crystal balls are perfect, either.

I do know that the countries hostile to the United States are investing a lot of money in both efforts, and probably, if you look at their budgets, they are investing more in ballistic missiles, just because it is an expensive program. I think they understand that it is one of our weaknesses. It is, as I said, the one Iraqi capability we underestimated during the Gulf War, but I think it is a false choice.

I think we have to pursue efforts in both directions, but I think before you came I was pointing out that these are both threats. They should both be taken seriously, but when I think about it, what is different about the two is, number one, we have some capability against the terrorist threat today. We intercepted people coming in from Canada during the Millennium event. We have aggressive counterintelligence programs that disrupt efforts when we can.

It is not 100 percent perfect, or we would not have had the *Cole* catastrophe, but we are actively engaged in—we have some ability to protect ourselves. We have no ability to protect ourselves against ballistic missiles.

Second, and this is the reason we have no ability, or part of the reason we have no ability to protect against ballistic missiles, we have a treaty prohibiting us from doing so. There is no treaty prohibiting us from working against terrorist attacks, and we would never contemplate signing them.

Senator COLLINS. General, I would like to switch gears and ask you a couple of questions about the Arrow weapons system which is being developed jointly by the United States and Israel, and would provide Israel with a capability to defend against short to medium-range ballistic missiles.

Last year, Congress provided \$95.2 million for the Arrow program. Could you tell me what you propose for funding for the Arrow this year, and whether or not you will be supporting the Arrow system improvement plan which Congress initiated last year?

General KADISH. In the fiscal year 2002 budget, if I recall the numbers correctly, we complete the purchase of the Arrow third battery and finish our commitment there, and I think the dollars associated with that and interoperability type activities amount to somewhere around \$50 million.

We have also proposed a \$20-million addition over and above those activities for further allocation to either the ASIP program or the improvement program, or for other activities that might be deemed beneficial, so we have added basically \$20 million to our commitment for 2002.

Senator COLLINS. It is my understanding that there is also co-operation underway with Israel in examining the possibility of an intercept in the boost phase over the course of the last several years, and that Israel has proposed a new joint boost phase launcher intercept program. Do you have a judgment of the feasibility of the Israeli program, and does your office intend to work with Israel on the boost phase launcher intercept program?

General KADISH. We have been in discussions with Israel over that particular effort, and I believe, if I am not mistaken, we have sent a report to Congress, I think last year, over the feasibility assessments that we put together for that, and I can provide that for the record, if you like.

[The information follows:]

REPORT TO CONGRESSIONAL DEFENSE COMMITTEES ON JOINT U.S.-ISRAEL BOOST PHASE INTERCEPT-ATTACK OPERATIONS USING UNMANNED AERIAL VEHICLES—15 APRIL 2000

I. INTRODUCTION

Purpose

This report responds to the request set out in the Senate report to accompany the National Defense Authorization Act for Fiscal Year 2000, S. Report No. 106-50, page 226. The Senate Armed Services Committee requested that the Secretary of Defense study the feasibility and benefits of a joint U.S.-Israel unmanned aerial vehicle (UAV) boost phase intercept (BPI)-attack operations (AO) program. This report summarizes the potential opportunities and pitfalls in establishing such a program. The committee report language is shown below.

The committee is aware that BMDO and the government of Israel have examined options for boost-phase intercept (BPI) of ballistic missiles, and the possibility of a joint U.S.-Israeli program using unmanned aerial vehicles (UAVs) to defeat ballistic missiles in the boost-phase or missile launchers following the launch of a missile. The committee understands that to date there is no agreement between the two governments on the potential merits of the options considered, nor has agreement been reached on a joint program.

Believing that the ability to defeat ballistic missiles before and during their launch phase could significantly enhance the security of the United States and its allies, the committee directs the Secretary of Defense to study the technical and operational feasibility of such a joint program, and determine if the missile defense benefits would justify initiating a joint U.S.-Israel BPI-attack operations program employing UAVs. The study shall include an assessment of whether a BPI-attack operations program can be developed that supports U.S. and Israeli requirements, whether the United States would support a program that is oriented primarily or exclusively toward satisfying Israeli requirements, and whether DOD supports an attack operations UAV system that does not include BPI capabilities. The committee directs the Secretary to submit a report on these matters to the congressional defense committees not later than February 15, 2000.

Background

[Deleted.]

II. SYSTEMS DESCRIPTION

[Deleted.]

UAV BPI

[Deleted.]

FIGURE 1. UAV BOOST PHASE INTERCEPT.

[Deleted.]

FIGURE 2.

[Deleted.]

III. PROGRAM ASSESSMENT

The assessments responding to the congressional report language are detailed in the next sections.

1. Technical Feasibility Assessment.
2. Operational Feasibility Assessment.
3. Missile Defense Benefits Assessment.
4. U.S. and Israeli Requirements Compliance.
5. U.S. Support for Program Oriented Primarily or Exclusively to Israeli Requirements.
6. DOD Support for an Attack Operations UAV That Does Not Include BPI Capabilities.
 1. Technical Feasibility Assessment UAV BPI
 2. Operational Feasibility Assessment [Deleted.]

WEAPON CONTROL AND BATTLE MANAGEMENT

- [Deleted.]
3. Missile Defense Benefits Assessment
 4. U.S. and Israel UAV BPI-Attack Operations Requirements Compliance [Deleted.]
 5. U.S. Support for Program Oriented Primarily or Exclusively to Israeli Requirements [Deleted.]
 6. DOD Support for an Attack Operations UA that does Not Include BPI Capabilities [Deleted.]

IV. NON-PROLIFERATION AND POLICY CONCERNS

[Deleted.]

V. SUMMARY

[Deleted.]

We will continue those discussions, but I think subject to the Secretary's further comments, that will be basically a fiscal year 2003 decision as we deliberate through those budget issues.

Senator COLLINS. Thank you. Thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Collins.

Senator Kennedy.

Senator KENNEDY. Thank you, Mr. Chairman. Welcome, Mr. Secretary, and General Kadish. We are glad to see you here.

I think, as maybe the members of the committee know, General Kadish was the commanding officer at Hanscom AFB in Massachusetts. He had some very important responsibilities in the areas of intelligence, advanced research, a whole wide range of areas, and has many, many friends up there. He did an outstanding job. Mr. Secretary, you are fortunate to have the General.

I want to get back to the point about where we are and where we are going. We want to congratulate you on the success of the test last Saturday. We all understand we still have a long way to go, but that is an important benchmark. We all take pride, I certainly do, in the work that is being done on theater defense. That has been impressive. We followed that. I have closely, obviously, because Raytheon is in my own State of Massachusetts, and we are always interested in the progress, as well as some of the problems that they have up there.

But I want to get back to the question of where we are and where we are going, and where we have been in terms of research

and get some idea now about how we are going to make judgments about the research program.

We had the Secretary of Defense, on June 28, appear before the committee to present the 2002 budget, and when asked about the details on ballistic missiles, he said he had not been briefed on the BMD proposal, and he had not made any decisions—this was the end of June. We are now into mid-July—been briefed about it, and had not made any decisions about it, even though we now have been provided with the budget information, we are told. It is for a proposed program. The actual content of the program will be decided later.

Now, this is the Secretary of Defense before the committee as recently as 3 weeks ago.

So now we have your own response to others about the fact that a lot of this is going to be in-theater defense, and others on ballistic defense, and General Kadish's statement today, he said, I cannot tell you today exactly what the ballistic missile system will look like, even 5 years from now.

Well, he says, he continues here, evidently—and General Kadish, you also said at a press conference last Friday that you have internal plans that you are working on at the present time that are spelling out how these resources are going to be made. What have we spent, what has DOD spent during the whole "Star Wars" on ballistic missile defense, \$35, \$40 billion, some have estimated to \$60 billion, roughly? General, do you know? Well, if it is not that figure, are we in the ball park?

General KADISH. About \$5 billion a year, on average.

Senator KENNEDY. Well, \$45 or \$50 billion has now been expended on this to date. We are not starting over here. We have spent \$45 or \$50 billion. I think we want to disabuse ourselves that we are suddenly starting fresh now with all of this. The DOD has already spent \$45 or \$50 billion to date on this.

Now you are asking for \$8 billion more, and even though you have spent \$45 or \$50 billion, evidently you are not able to give the committee a clear idea of why we would expect that this would be either more effective than what has been spent in the past, other than I hear that maybe we are looking along some different areas, or different lines.

Secretary WOLFOWITZ. If I might, Senator, what we spent in the past has already produced results. I would complain that it has not produced results as fast as I think this country might have in the past been capable of. We produced Polaris submarines in 5 years with a crash effort. We got to the moon in 10 years with a crash effort. I would say this has not been a crash effort, but it has produced important results.

You referred to one of the most important ones a few minutes ago, which is our ability now, finally, 10 years after the Gulf War, to have hit-to-kill capability against a primitive SCUD missile. I would have thought, given the fact that Saddam Hussein almost brought Israel into that war and had success in killing Americans with SCUD missiles, that we might have moved faster, but we have moved, and this budget includes a substantial amount of money, \$857 million, to accelerate the acquisition and deployment

of that PAC-3 system which would protect us in the Persian Gulf, and could protect allies.

Senator KENNEDY. I am talking about the other, the PAC-3. I have been a strong supporter, many of us have been, in terms of the theater missile. We are trying to ask, in terms of outer space, the ballistic missile defense, the amounts we are going to be spending on this, and quite frankly, for every technology, for the most part we have seen countertechnologies, and serious questions with all the billions we spent on the Stealth technology, whether that is really going to work any more because of new breakthroughs in radar in terms of it.

I do not want to spend much of my time here now going and thinking in terms of technology that has developed that there have not been countertechnologies that have been developed. The moon example is not really clear, because that is a different situation, but to come back to this question, we have spent the \$45 billion.

We want to have, again, some idea as to how the \$8 billion is going to be expended, because we heard testimony by the Secretary of Defense before the committee 3 weeks ago where he indicated that he was not prepared to give that to us. My question is, which has been repeated by others here, and perhaps we are going to get the same answers, can you give us any more indication or assurance that it is going to be any more successful, and what it is going to be, and what the time lines are going to be in terms of expenditures?

Secretary WOLFOWITZ. Senator, the Secretary has been briefed in detail. We have submitted detail, and I was trying to explain in my previous response that detail includes a great deal of money on systems like PAC-3, \$857 million on PAC-3 alone that have now been demonstrated to be successful.

I think before you came, Senator, we showed a film strip of the successful test Saturday night, and believe me, I would not say that that test demonstrates a capability, but it certainly demonstrates a very big advance in what we can do, and you do not get to this kind of very successful, I mean, very demanding technological challenge overnight. I think the record shows we are making serious progress, demonstrable progress on shorter-range missiles and I think we clearly are within reach of doing something with long-range systems, so yes, we can give you great detail on the plan for that expenditure, and I think it is a very convincing story that General Kadish and his team put together.

Senator KENNEDY. Well, my time is up, but you are going to give us, then, how that \$8 billion is going to be expended?

Secretary WOLFOWITZ. Yes.

Senator KENNEDY. Thank you. Has it been made available to the committee?

Secretary WOLFOWITZ. I believe it is.

Senator KENNEDY. The \$8 billion, how you are going to spend that \$8 billion?

Secretary WOLFOWITZ. The General says at the end of this week. [The information referred to follows:]

The fiscal year 2002 amended budget submission has been submitted to Congress and provides detailed program plans for the full fiscal year 2002 program.

Senator KENNEDY. It has not been, then, you have not given it to the committee.

Secretary WOLFOWITZ. My understanding is we will be submitting it at the end of this week.

Chairman LEVIN. Which means you have not yet given it to the committee.

Secretary WOLFOWITZ. Yes. I apologize.

Chairman LEVIN. At this time, I request unanimous consent that Senator Landrieu's statement be made a part of the record.

[The prepared statement of Senator Landrieu follows:]

PREPARED STATEMENT BY SENATOR MARY L. LANDRIEU

Thank you Mr. Chairman: I would like to thank you for calling this important hearing to review the National Missile Defense Program. I would also like to take this opportunity to welcome and thank Secretary Wolfowitz and General Kadish for appearing here today.

As we all know, the impassioned dispute over U.S. national missile defense has dominated press coverage around the world almost daily over the last few months. Secretary Wolfowitz has worked tirelessly since taking office on the difficult but important task of selling missile defense, not only to the Russians and Chinese, but to our allies as well.

Unfortunately, we all know that the threat of a missile attack from a rogue nation is credible and the proliferation of missile technology continues as we sit here today. As long as this remains the case, it is our responsibility to devise an effective defense system and a policy that provides the American people with a sufficient level of protection. Adm. Richard Mies, the Commander in Chief of the U.S. Strategic Command uses an interesting analogy which I find quite appropriate. To have an effective military, you need both a sword and a shield. A soldier without a shield is defenseless and a soldier without a sword lacks the ability to take action against his enemies. If either is too big, it prevents the soldier from maximizing use of the other. The trick is to balance both the shield and sword in an equitable manner.

We are faced with that very task when it comes to missile defense. While no rogue nation possesses the capability today, we know that several states are actively pursuing development or acquisition of ballistic missile technology. There is mounting and credible evidence that, in the future, national missile defense is a capability this country will be forced to acquire. However, it is important to develop, test and deploy a valid, credible system. If the shield is made of paper, it's worse than having no shield at all because it gives false confidence with potentially disastrous consequences.

Across the political spectrum there is debate over the need for missile defense, the impact on the ABM Treaty, our relationship with Russia, our allies and other countries and on the amount that should be invested on missile defense. There are strong opinions on all aspects of this tremendously complicated issue. Senator Sam Nunn, a man I have a great deal of respect for, has commented on this debate saying, "It's time to get the theology out of it and the technology into it."

I couldn't agree more. When you look at the National Missile Defense Deployment Readiness Review, one fact is undisputable. Regardless of politics or ideology, the one thing the national missile defense program and Ballistic Missile Defense Organization need is TIME. Time to develop, test and evaluate this technically complex system. Time to negotiate with the Russians. Time to consult with our allies and address their concerns. No matter how bad we want the system, or how much money we throw at it, time is still required.

It's clear that money must be spent on this program, and I support that. It is equally clear that there are other threats and pressing needs facing our military, indeed facing our country, today. Given the limited resources available, it would be unwise to invest all of them, or even the majority of them, on national missile defense. It's a time for tough choices. Those choices will significantly impact the readiness, posture and capability of our military forces for years to come. They will affect the size and strength of both our sword and shield. The administration amended it's defense budget request adding \$18.4 billion which I wholly support. That budget includes spending an additional \$3 billion on missile defense which needs further review based on developing technology and its implications on ABM Treaty negotiations.

It's important that the American People have the confidence that their tax dollars are properly spent. With that in mind, I look forward to hearing Secretary

Wolfowitz' and General Kadish's testimony here today. I know it will be insightful and help this committee make those tough choices.

Again, thank you Mr. Chairman for calling this important hearing.

Chairman LEVIN. First, about your statements, General, that your predecessors did not have the same instructions that you did relative to ABM. I just want to read General Lyles' testimony, when he said there is nothing we would do differently.

The question from Senator Robb was, "If you did not have an ABM Treaty, are there things you would be doing, or could be doing less expensively now?" General Lyles: "In all honesty, Senator Robb, there is nothing we would be doing differently."

Do you disagree with General Lyles?

General KADISH. No.

Chairman LEVIN. General Ralston said, I would like to add, as I understand it, and as General Lyles has said, there is nothing today in the Antiballistic Missile Treaty that is constraining what we are doing in our National Missile Defense Program, or our theater missile defense program. Do you disagree with that?

General KADISH. No, Senator.

Chairman LEVIN. So this is really the first time we may be facing that issue, and the difference, of course, between what President Clinton did last year and what you are doing this year is that President Clinton never made the decision that if you could not modify the treaty, that he would walk away from it.

That decision was never made by President Clinton. He said there would be four factors which he would consider before making that decision, whereas this President, this administration has said "if Russia refuses the changes we propose, we will give prompt notice under the provisions of the treaty that we can no longer be a party to it." That is a huge difference.

Senator WARNER. Can you give a citation to what you just read?

Chairman LEVIN. That is the Citadel speech, September 1999, Governor Bush, then a candidate.

"If Russia refuses the changes we propose, we will give prompt notice under the provisions of the treaty that we can no longer be a party to it." This is a totally different set of circumstances from what it was in the previous administration, which said, we might give notice, we might not, we are going to look at four factors, including whether or not we are more secure by pulling out of that treaty, including the effect on arms reductions, including the cost-effectiveness, including the operational effectiveness. All factors would go into it.

You have given us three sheets of paper with the outline of the three activities which you apparently indicate could bump up against the ABM Treaty this year. One is called the missile defense system test bed, the other one, Aegis, Spy-1 tracking and strategic missile, the other one is System Integration Test II.

First of all, we will make those three documents a part of the record, but my question is this to either one of you. Could you identify on those three sheets of paper which of those activities will in a matter of months, not years, likely conflict with the ABM Treaty's limits, since you have now informed us that in a matter of months, not years, it is likely the activities that are in the budget request for 2002 will conflict with, as the administration said last

Wednesday, "bump up against" the treaty? Can you just identify for us on these three sheets now which of these specific activities are likely to either conflict with or bump up against the treaty under your budget request?

Secretary WOLFOWITZ. Senator, we identified all three of these because all three of them have the potential of raising serious ABM Treaty compliance problems.

Chairman LEVIN. Can you just identify, for instance, in the test bed document, some of these—a lot of this you say is not likely to happen inside these documents.

Secretary WOLFOWITZ. That is why we need a compliance review.

Chairman LEVIN. I know, but will you do this for the record? Since there is a lot in these documents, which you say do not see any compliance problem, it is hard for me to sort out which will and which will not, and this is a specific question, and you can do it for the record. On these three sheets of paper, which of these activities will, in all likelihood, if you are funded in 2002 as requested, conflict with or bump up against the ABM Treaty? That is my question for the record.

Secretary WOLFOWITZ. We will work with your staff to make sure we have the correct question and we will answer it for the record.

[The information referred to follows:]

All three activities (the Missile Defense System Test Bed, Aegis SPY-1 tracking a strategic ballistic missile, and Systems Integration Test II (SIT II) combining data from ABM and non-ABM radars) could conflict with our obligations under the ABM Treaty. A compliance assessment is underway within the Department to determine whether these activities would violate the treaty. That said, the administration has made clear that it will not violate the treaty, and the activities of the Ballistic Missile Defense Organization, like all DOD activities, will be conducted in compliance with U.S. arms control obligations. Therefore, the ABM Treaty will not be violated if the missile defense program is funded as requested.

Chairman LEVIN. Will you also be giving us the compliance review group's results promptly after you receive them?

Secretary WOLFOWITZ. I will do my best.

Chairman LEVIN. What would constrain you? There is no treaty that prohibits you from doing that.

Secretary WOLFOWITZ. These are advisory opinions from the Secretary of Defense's lawyers to the Secretary of Defense, and I assume we will share them with you.

Chairman LEVIN. Let us know, would you, promptly, if you are not going to promptly share those with us.

Secretary WOLFOWITZ, you said today that the developmental activity at Fort Greely could be made an operational capability with little modification. What specific modifications would be needed to convert Fort Greely from a developmental or test capability to a rudimentary operational capability?

Secretary WOLFOWITZ. I think I will let General Kadish answer that.

General KADISH. We still have a lot of planning to do to implement this test bed and the ongoing activities in the coming months, and certainly through 2002, we would probably be in a better position to answer that when we do exactly the configuration we want to test and to put that together.

But I guess I would answer in a general way that if we have a test activity that represents an operationally realistic configuration

where everything is hooked up right and that we could launch out of Fort Greely if we wanted to test a particular segment and it was safe enough. Then by definition you have a capability there to launch and then if you have confidence in the system based on all the other testing you are going to do to actually use it in combat, that would be a decision that would have to be taken by the Department.

Chairman LEVIN. But the question was not the decision, but what specific modifications would need to be made to convert Ft. Greely from your proposed developmental test facility to a rudimentary operational capability.

General KADISH. I guess the answer to that is we don't know in detail what those would be, but in general it would be command and control activities to uniformed people to actually do the combat alert type of activities. So over time we will define exactly what that is. I can't tell you specifically today what it would be.

Chairman LEVIN. My time is up. Thank you. Senator Warner.

Senator WARNER. Mr. Chairman, I would like to defer my time to our colleague and then I will follow back in sequence with my wrap-up. But I would like to make one unanimous consent request, that Secretary Wolfowitz provide for the record statements that President Bush made subsequent to his September 24, 1999 Citadel speech to which our chairman referred. At that time he stated if Russia refuses to accept changes to the ABM Treaty, as we've proposed we will give prompt notice of our intention to withdraw, under article 15 of the treaty. I think he has made a series of statements about the framework that he is hoping to achieve and I think those statements should be examined in parallel with his statement at the Citadel. So will you provide that for the record?

Secretary WOLFOWITZ. We will do that, Senator.

Senator WARNER. It can be put in the record at this juncture. I will yield my time to Senator Allard.

[The information referred to follows:]

MAY 23, 2000

NATIONAL PRESS CLUB

WASHINGTON, DC

GOV. GEORGE W. BUSH (R-TX), PRESIDENTIAL CANDIDATE: ... to nuclear security that matches a new era. When it comes to nuclear weapons, the world has changed faster than U.S. policy. The emerging security threats to the United States, its friends and allies, and even to Russia, now come from rogue states, terrorist groups and other adversaries seeking weapons of mass destruction and the means to deliver them. Threats also come from insecure nuclear stockpiles and the proliferation of dangerous technologies. Russia itself is no longer our enemy. The Cold War logic that led to the creation of massive stockpiles on both sides is now outdated. Our mutual security no longer depend on a nuclear balance of terror.

While deterrence remains the first line of defense against nuclear attack, the standoff of the Cold War was born of a different time. That was a time when our arsenal also served to check the conventional superiority of the Warsaw Pact. Then the Soviet Union's power reached deep into the heart of Europe, to Berlin and Warsaw, Budapest and Prague. Today these are the capitals of NATO countries. Yet almost a decade after the end of the

Cold War, our nuclear policy still resides in that already distant past.

The Clinton-Gore administration has had over seven years to bring the U.S. force posture into the post-Cold War world. Instead, they remain locked in a Cold War mentality. It is time to leave the Cold War behind and to fend against the new threats of the 21st century. America must build effective missile defenses based on the best available options at the earliest possible date.

Our missile defense must be designed to protect all 50 states and our friends and allies and deployed forces overseas from missile attacks by rogue nations or accidental launches.

The Clinton administration first denied the need for a national missile defense system. Then it delayed. Now the approach it proposes is flawed, a system initially based on a single site when experts say that more is needed. A missile defense system should not only defend our country, it should defend our allies with whom I will consult as we develop our plans. And any change in the ABM Treaty must allow the technologies and experiments required to deploy adequate missile defenses.

The administration is driving toward a hasty decision on a political timetable.

No decision would be better than a flawed agreement that ties the hands of the next president and prevents America from defending itself.

Yet there are positive, practical ways to demonstrate to Russia that we are no longer enemies. Russia and our allies in the world need to understand our intentions: America's development of missile defenses is a search for security, not a search for advantage.

America should rethink the requirements of nuclear -- for nuclear deterrence and a new security environment. The premises of Cold War nuclear targeting should no longer dictate the size of our arsenal.

As president, I will ask the secretary of defense to conduct an assessment of our nuclear force posture and determine how best to meet our security needs. While the exact number of weapons can come only from such an assessment, I will pursue the lowest possible number consistent with our national security. It should be possible to reduce the number of American nuclear weapons significantly further than what has been already agreed to under START II without compromising our security in any way.

We should not keep weapons that our military planners do not need. These unneeded weapons are the expensive relics of dead conflicts, and they do nothing to make us more secure.

In addition, the United States should remove as many weapons as possible from high alert, high-trigger status, another unnecessary vestige of Cold War confrontation. Preparation for quick launch within minutes after a warning of an attack was the rule during the era of superpower rivalry. But today, for two nations at peace, keeping so many weapons on high alert may create unacceptable risks of accidental or unauthorized launch.

So as president, I will ask for an assessment of what we can safely do to lower the alert status of our forces. These changes to our forces should not require years and years of detailed arms control negotiations.

There is a precedent that proves the power of leadership. In 1991, the United States invited the Soviet Union to join it in removing tactical nuclear weapons from the arsenal. Huge reductions were achieved in a matter of months, making the world much safer more quickly.

Similarly, in the area of strategic nuclear weapons, we should invite the Russian government to accept the new vision that I have outlined, and act on it. But the United States should be prepared to lead by example because it is in our best interests and the best interests of the world.

This would be an act of principled leadership, a chance to seize the moment and begin a new era of nuclear security, a new era of cooperation on proliferation and nuclear safety.

The Cold War era is history. Our nation must recognize new threats, not fixate on old ones. On the issue of nuclear weapons, the United States has an opportunity to lead to a safer world, both to defend against nuclear threats and reduce nuclear tensions. It is possible to build a missile defense and diffuse confrontation with Russia. America should do both.

May 1, 2001

Text of President Bush's Speech on Missile Defense

By THE ASSOCIATED PRESS

Text of President Bush's speech at the National Defense University, as transcribed by eMediaMillworks, Inc.

Thank you very much, Mr. Secretary. I appreciate you being here.

I also want to thank Secretary Powell for being here as well.

My national security adviser, Condi Rice, is here, as well as the vice chairman of the Joint Chiefs, General Myers. Appreciate Admiral Clark and General Ryan for being here as well.

But most of all, I want to thank you, Admiral Gaffney, and the students for NDU for having me here today.

For almost 100 years, this campus has served as one of our country's premier centers for learning and thinking about America's national security. Some of America's finest soldiers have studied here: Dwight Eisenhower and Colin Powell. Some of America's finest statesmen have taught here: George Kennan.

Today, you're carrying on this proud tradition forward, continuing to train tomorrow's generals, admirals and other national security thinkers, and continuing to provide the intellectual capital for our nation's strategic vision.

This afternoon, I want us to think back some 30 years to a far different time in a far different world. The United States and the Soviet Union were locked in a hostile rivalry. The Soviet Union was our unquestioned enemy, a highly armed threat to freedom and democracy. Far more than that wall in Berlin divided us.

Our highest ideal was and remains individual liberty. Theirs was the construction of a vast communist empire. Their totalitarian regime held much of Europe captive behind an Iron Curtain. We didn't trust them, and for good reason. Our deep differences were expressed in a dangerous military confrontation that resulted in thousands of nuclear weapons pointed at each other on hair-trigger alert.

The security of both the United States and the Soviet Union was based on a grim premise that neither side would fire nuclear weapons at each other, because doing so would mean the end of both nations.

We even went so far as to codify this relationship in a 1972 ABM Treaty, based on the doctrine that our very survival would best be ensured by leaving both sides completely open and vulnerable to nuclear attack. The threat was real and vivid. The Strategic Air Command had an airborne command post called the Looking Glass, aloft 24 hours a day, ready in case the president ordered our strategic forces to move toward their targets and release their nuclear ordnance.

The Soviet Union had almost 1.5 million troops deep in the heart of Europe, in Poland, in Czechoslovakia, Hungary and East Germany.

We used our nuclear weapons, not just to prevent the Soviet Union from using their

nuclear weapons, but also to contain their conventional military forces, to prevent them from extending the Iron Curtain into parts of Europe and Asia that were still free.

In that world, few other nations had nuclear weapons, and most of those who did were responsible allies, such as Britain and France. We worried about the proliferation of nuclear weapons to other countries, but it was mostly a distant threat, not yet a reality.

Today, the sun comes up on a vastly different world. The wall is gone, and so is the Soviet Union. Today's Russia is not yesterday's Soviet Union.

Its government is no longer communist. Its president is elected. Today's Russia is not our enemy, but a country in transition with an opportunity to emerge as a great nation, democratic, at peace with itself and its neighbors.

The Iron Curtain no longer exists. Poland, Hungary and Czech Republic are free nations and they are now our allies in NATO, together with a reunited Germany. Yet, this is still a dangerous world, a less certain, a less predictable one.

More nations have nuclear weapons and still more have nuclear aspirations. Many have chemical and biological weapons. Some already have developed a ballistic missile technology that would allow them to deliver weapons of mass destruction at long distances and incredible speeds, and a number of these countries are spreading these technologies around the world.

Most troubling of all, the list of these countries includes some of the world's least-responsible states. Unlike the Cold War, today's most urgent threat stems not from thousands of ballistic missiles in the Soviet hands, but from a small number of missiles in the hands of these states -- states for whom terror and blackmail are a way of life.

They seek weapons of mass destruction to intimidate their neighbors, and to keep the United States and other responsible nations from helping allies and friends in strategic parts of the world. When Saddam Hussein invaded Kuwait in 1990, the world joined forces to turn him back. But the international community would have faced a very different situation had Hussein been able to blackmail with nuclear weapons.

Like Saddam Hussein, some of today's tyrants are gripped by an implacable hatred of the United States of America.

They hate our friends. They hate our values. They hate democracy and freedom, and individual liberty. Many care little for the lives of their own people. In such a world, Cold War deterrence is no longer enough to maintain peace, to protect our own citizens and our own allies and friends.

We must seek security based on more than the grim premise that we can destroy those who seek to destroy us. This is an important opportunity for the world to rethink the unthinkable and to find new ways to keep the peace. Today's world requires a new policy, a broad strategy of active nonproliferation, counter-proliferation and defenses.

We must work together with other like-minded nations to deny weapons of terror from those seeking to acquire them.

We must work with allies and friends who wish to join with us to defend against the harm they can inflict. And together, we must deter anyone who would contemplate

their use.

We need new concepts of deterrence that rely on both offensive and defensive forces. Deterrence can no longer be based solely on the threat of nuclear retaliation. Defenses can strengthen deterrence by reducing the incentive for proliferation.

We need a new framework that allows us to build missile defenses to counter the different threats of today's world. To do so, we must move beyond the constraints of the 30-year-old ABM Treaty. This treaty does not recognize the present or point us to the future. It enshrines the past.

No treaty that prevents us from addressing today's threats, that prohibits us from pursuing promising technology to defend ourselves, our friends and our allies is in our interests or in the interests of world peace.

This new framework must encourage still further cuts in nuclear weapons: 'Nuclear weapons still have a vital role to play in our security and that of our allies.

We can and will change the size, the composition, the character of our nuclear forces in a way that reflects the reality that the Cold War is over. I'm committed to achieving a credible deterrent with the lowest possible number of nuclear weapons consistent with our national security needs, including our obligations to our allies.

My goal is to move quickly to reduce nuclear forces. The United States will lead by example to achieve our interests and the interests for peace in the world.

Several months ago, I asked Secretary of Defense Rumsfeld to examine all available technologies and basing modes for effective missile defenses that could protect the United States, our deployed forces, our friends and our allies. The secretary has explored a number of complementary and innovative approaches.

The secretary has identified near-term options that could allow us to deploy an initial capability against limited threats. In some cases, we can draw on already established technologies that might involve land-based and sea-based capabilities to intercept missiles in midcourse or after they re-enter the atmosphere.

We also recognize the substantial advantages of intercepting missiles early in their flight, especially in the boost phase. The preliminary work has produced some promising options for advanced sensors and interceptors that may provide this capability. If based at sea or on aircraft, such approaches could provide limited but effective defenses.

We have more work to do to determine the final form the defenses might take. We will explore all of these options further. We recognize the technological difficulties we face, and we look forward to the challenge. Our nation will assign the best people to this critical task. We will evaluate what works and what does not.

We know that some approaches will not work. We also know that we'll be able to build on our successes. When ready, and working with Congress, we will deploy missile defenses to strengthen global security and stability.

I've made it clear from the very beginning that I would consult closely on the important subject with our friends and allies, who are also threatened by missiles and weapons of mass destruction.

Today, I'm announcing the dispatch of high-level representatives to allied capitals in

Europe, Asia, Australia and Canada to discuss our common responsibility to create a new framework for security and stability that reflects the world of today. They will begin leaving next week. The delegations will be headed by three men on this stage, Rich Armitage, Paul Wolfowitz and Steve Hadley, deputies of the State Department, the Defense Department and the National Security staff.

Their trips will be part of an ongoing process of consultation, involving many people in many levels of government, including my Cabinet secretaries. These will be real consultations. We are not presenting our friends and allies with unilateral decisions already made. We look forward to hearing their views, the views of our friends, and to take them into account. We will seek their input on all the issues surrounding the new strategic environment.

We'll also need to reach out to other interested states, including China and Russia. Russia and the United States should work together to develop a new foundation for world peace and security in the 21st century. We should leave behind the constraints of an ABM treaty that perpetuates a relationship based on distrust and mutual vulnerability.

This treaty ignores the fundamental breakthroughs in technology during the last 30 years. It prohibits us from exploring all options for defending against the threats that face us, our allies and other countries.

That's why we should work together to replace this treaty with a new framework that reflects a clear and clean break from the past, and especially from the adversarial legacy of the Cold War.

This new cooperative relationship should look to the future, not to the past. It should be reassuring, rather than threatening. It should be premised on openness, mutual confidence and real opportunities for cooperation, including the area of missile defense.

It should allow us to share information so that each nation can improve its early warning capability and its capability to defend its people and territory. And perhaps one day, we can even cooperate in a joint defense.

I want to complete the work of changing our relationship from one based on a nuclear balance of terror to one based on common responsibilities and common interests. We may have areas of difference with Russia, but we are not and must not be strategic adversaries.

Russia and America both face new threats to security. Together, we can address today's threats and pursue today's opportunities. We can explore technologies that have the potential to make us all safer.

This is a time for vision, a time for a new way of thinking, a time for bold leadership. The Looking Glass no longer stands its 24-hour-a-day vigil. We must all look at the world in a new, realistic way to preserve peace for generations to come.

God bless.

Senator ALLARD. I thank Senator Warner for yielding. I would like to pursue this issue on the THAAD radar and direct my question to General Kadish. I understand the THAAD radar was present at Kwajalein this weekend when you conducted your missile defense test. Did that radar participate in the test?

General KADISH. No, it did not, Senator.

Senator ALLARD. Since you've identified the THAAD as part of the terminal defense element of your overall ballistic missile defense system, isn't it potentially useful to have at least the THAAD radar or the BMC-3 participate in tests like the one conducted this weekend?

General KADISH. Eventually it would be, Senator.

Senator ALLARD. Is such participation permitted by the ABM Treaty?

General KADISH. At this time, it is not and I believe one of the situations that has been provided by the Secretary's testimony of using our X-band radar at Kwajalein to do a theater-level test, which is the opposite of what you're describing, is in fact on the table for treaty compliance issues. So concurrent use of these assets is an issue with the treaty.

In regard to the THAAD, we haven't at this point in time done sufficient planning, although we have for use of the GBRP such that we would want to propose using the THAAD in these types of tests. Our intent over time and certainly over the next year is to plan in detail how we would exploit those types of resources.

Senator ALLARD. I'm further told that several years ago the THAAD radar was at Kwajalein for testing when an operational ICBM test was conducted and I'm told that the THAAD test manager saw this as a wonderful opportunity to characterize the performance of the THAAD radar but that his proposal to do so set off a minor panic in the Pentagon because this would have violated the ABM Treaty. Is this an example of the kind of opportunity you have to forego because of the constraints of the ABM Treaty?

General KADISH. Without the constraints or thinking about the constraints we would be able to exploit that, and that is our intent at this point in time.

Senator ALLARD. I would like to pursue the ABM Treaty and security issues. We have heard from several colleagues about their concerns that U.S. missile defenses will spur the proliferation of missile and weapon/missile defense technologies and lead to the build-up of offensive forces that would reduce U.S. security. Since concerns are based in part on a belief that the ABM Treaty has inhibited the growth of these forces, or such concerns based on that, how many warheads did the Soviet Union have in 1972 when the ABM Treaty was signed? Do you know that?

Secretary WOLFOWITZ. I would be dredging up my memory. I don't believe they had substantially MIRVed their force at that time, thousands less than they do today, that's for certain.

Senator ALLARD. Then when we looked at it 10 years later, do you have any idea how many warheads the Soviet Union had and if you can't give me a specific figure, was it dramatically increased, moderately increased?

Secretary WOLFOWITZ. I think dramatically increased throughout the seventies, Senator. We can get you those exact numbers for the record, obviously.

[The information referred to follows:]

When the ABM Treaty was signed in 1972, the Soviet Union had 2,081 strategic missile (e.g., ICBM and SLBM) warheads. By 1982, the Soviet inventory had grown to 8,555 warheads.

Senator ALLARD. So in your view, did the ABM Treaty accomplish its goal of preventing or slowing down the Soviet offensive buildup?

Secretary WOLFOWITZ. I don't know if that was its goal. It certainly didn't accomplish it if that was the goal.

Senator ALLARD. Since 1972 how many nations have ballistic missile capabilities?

Secretary WOLFOWITZ. I believe we now estimate—let me get it exactly.

Senator ALLARD. I think it was 28 or 29 now that I remember.

Secretary WOLFOWITZ. Yes.

Senator ALLARD. Yes. How many nations have or are seeking to have ballistic missile capabilities today?

Secretary WOLFOWITZ. Beyond the ones that already have it?

Senator ALLARD. Yes, of the 28.

Secretary WOLFOWITZ. I would have to get you that for the record. I think they are, in experimental programs there are quite a few.

[The information referred to follows:]

At present, 28 countries have ballistic missile capability, either through purchase (17 countries), or through indigenous development programs (11 countries). Six countries, all with indigenous capability, are developing longer range (MRBM, IRBM, or ICBM) systems.

Senator ALLARD. I think it would help us to better understand what's happened worldwide and the dynamics out there if you could describe the ongoing Chinese strategic modernization. In your view is this modernization effort a response to U.S. Ballistic Missile Defense programs?

Secretary WOLFOWITZ. Absolutely not. It's been underway for some time and I think it has its own dynamic partly motivated by growing Chinese military budgets, partly motivated by, I think, their growing sense of their position in Asia. If I might say in answer to your previous question, it's my own personal sense that one of the reasons that countries like Iraq and Iran and North Korea are investing so much in ballistic missile defenses is precisely because they realize that they can't match us in other areas of military capability and I am sorry to bore you, but as I've said repeatedly, this is the one Iraqi capability that proved in the Gulf War to be more serious than what we had estimated it to be.

I think they're investing, not in spite of the ABM Treaty, but to some extent because of the ABM Treaty.

Senator ALLARD. Secretary Wolfowitz, I'm going to ask for your view on Russian security. Would Russian security be enhanced by proliferating missile and WMD technologies?

Secretary WOLFOWITZ. No, it wouldn't, and again a point that I think was observed in an important way earlier, I think Russian security would be enhanced if they could reduce their vulnerability to limited missile attack. I also think our security will be enhanced if they can reduce their vulnerability and I think the same goes for the United States. We are in a different era. It is not an era where it is our goal to keep Russia vulnerable and it shouldn't be their goal to keep us vulnerable.

Senator ALLARD. Also, as we all know, MAD, or mutually-assured destruction, was the only means by which we deterred the Soviet Union from missile attack against the United States. While mutually-assured destruction worked in a bipolar world, today the world has changed and is a more chaotic and dangerous place and that is why we must have an updated approach, I believe, to deterrence, both offensively and defensively. I believe that Admiral Mies said

it best on July 11 in front of the Strategic Subcommittee when he said: "Missile defense would not be a replacement for an assured retaliatory response, but rather an added dimension to complement our existing deterrent capabilities and an insurance policy against a small-scale ballistic missile attack. It would also serve as an element of our strategy to dissuade countries from acquiring weapons of mass destruction and ballistic missiles."

My question: will the concept of mutually-assured destruction remain a part of the administration's deterrent strategy?

Secretary WOLFOWITZ. I've never been fond of the mutually-assured destruction term, but yes, certainly nuclear deterrence will remain part of our deterrent strategy but the reliance exclusively on retaliation as our deterrent is something we're trying to move away from. Retaliation is always, I think, going to be a part of deterrence, the potential of retaliation.

Senator ALLARD. Mr. Chairman, my time has expired again. Thank you.

Chairman LEVIN. Senator Allard, thank you.

Senator Nelson.

Senator BILL NELSON. Thank you, Mr. Chairman. Mr. Secretary, following up on your exchange with the Chairman, as I understood it, the concept of Alaska becoming operational comes to fruition when you replace the testing crew with operational personnel. Was that your answer to the Chairman's question?

Secretary WOLFOWITZ. I would have to refer back to General Kadish, but what I hear General Kadish saying is that I think it is essentially, if everything worked well experimentally, it would be essentially a software change to turn it into an operational capability. It's a little more than just changing the mental intent. There would have to be definitely command and control changes, probably some communications changes, but I think it is what you would call in the area of software.

Senator BILL NELSON. In terms of Alaska and the treaty, is that when, in your opinion, the treaty would be abrogated and up until that point with regard to the Alaska facility it would not?

Secretary WOLFOWITZ. I don't think I need to be a lawyer to say that if we crossed that line and turned it into operational capability that would be a violation of the treaty.

Senator BILL NELSON. Yes, I understand. My question is up to that point.

Secretary WOLFOWITZ. That is where you get into questions of intent and verification and what can and can't be verified by national technical means and, it isn't simply that lawyers have a way of making problems complicated, this is a genuinely complicated problem because in the, what is it now, 29 years since the treaty was signed, we have had a lengthy, tedious record of going over these issues with the Russians. You have to look at that record. You have to examine it. You have to weigh American positions, Russian positions. We are in a difficult zone and so I'm hoping that when the lawyers look at this they will give us at least some more clarity than I have right now.

Senator BILL NELSON. Well, thank you. General, I want to congratulate you on your test over the weekend. I would like to see you be very successful as you proceed with the various tests. By

reading the press I get the impression that you're going to have these tests scheduled quite frequently, and I am a little bit concerned that we might be sacrificing some of our success in the future with the number of tests. Would you comment on that, and the frequency of those tests?

General KADISH. I think our goal has always been in the test program to test frequently and often and move rapidly through our development program, because we built a whole series of technical milestones and specifications we want to check out. So the sooner we get it done, not only does the technology develop, but we save a lot of money, even though these tests are expensive.

So it is not our intent to test without the discipline required to do testing. I think that is the basic thrust of your question.

Secretary WOLFOWITZ. Senator, I share the congratulations to General Kadish on his success, but I sort of worry that people have to understand, I think, that if a program never suffers from test failures, then it's probably been too conservative a program. If you look at the history of our developments, the satellite program which put satellites in orbit suffered 11 straight test failures in its initial testing. The Polaris, which is one of our most successful systems, failed 66 out of 123 flights. I have a number of other examples in my testimony.

A successful development program has to include testing failures, so I would like to see them pushing aggressively and if and when they fail, I may not show you the film strip of it, but I do think they will be learning things.

Senator BILL NELSON. Hopefully the successful testing of a man-rated system does not occasion all of those failures, although we have seen those in the past, unfortunately, for example with the space shuttle.

Secretary WOLFOWITZ. Obviously when you get to the point of putting people's lives at risk with a test, you have to go up to a higher standard and even then, as you point out, you can have a failure.

Senator BILL NELSON. Well, under that theory, then, why did we wait over a year after the last one for this test to occur?

General KADISH. We are dealing with prototype hardware and over time we expect and intend and are working very hard at making this hardware more like the system we want to actually use and so it's going to get better.

But basically in the last 3 years to do four tests and to have two successes out of four is a major achievement. But we learn from our failures and the reason why it took us a year to come to this point is because we took the two failures that we had and learned from those and went back and took the time to fix everything.

Those types of failures we experienced, unfortunately from my point of view, were more related to quality problems, if you will, process problems and not the fundamental design and hardware. So in order to wring those types of process problems out, you have to put more discipline in the program and make sure that people do the right thing and in fact are rewarded for telling us when there is something wrong and that took us time.

Once we are confident we have those processes in place, which I have right now, then I expect that we will be able to do things more rapidly without those types of problems occurring.

Senator BILL NELSON. What was the reason for the failure a year ago?

General KADISH. The reason for the failure a year ago, we believe, was a circuit card that failed, that did not send the right signal to the kill vehicle to separate from the booster, and the reasons for those types of failures have to do with foreign object damage, those types of things.

Senator BILL NELSON. It was a failure that had nothing to do with the actual design of the new system of the kill vehicle to home in on the target?

General KADISH. Correct.

Senator BILL NELSON. So why did it take a year for what would normally be a pedestrian kind of failure? For what you are trying to test, why would it take a year?

General KADISH. Because it indicated that it was a failure in something that we did not expect because as you correctly point out, it actually worked on all the other flights and it is something we know how to do. That indicated to us that we needed to go back and look at every piece of the hardware in the test program and not leave any stone unturned and make sure that the smallest detail in our program was looked at to ensure the type of discipline I talked about earlier. That took time and we took the time to do that.

Now that we have gone through that and have adjusted people's expectation to this rigorous way of doing it, it is my opinion we can move faster in our test program, especially given if you have successes, you want to turn up the complexity and the challenge, as Secretary Wolfowitz points out, to test the edges of the envelope, or you may fail doing such.

Senator BILL NELSON. When is the next test scheduled?

General KADISH. Our next test is currently scheduled for the end of October, early November time frame of this year.

Senator BILL NELSON. The next one after that?

General KADISH. It will be in the February time frame.

Senator BILL NELSON. You feel comfortable with that kind of interval to build on either the success or failure of each of those tests?

General KADISH. That is correct, and when you have a success and you analyze the data that supports that and find that there are minor or no glitches, it gives you even more confidence in your next test schedule.

Senator BILL NELSON. When in this regime of testing is your first major full up with many different targets that are not actual targets, that are decoys; when does that occur?

General KADISH. We haven't taken the decision of how we are going to add complexities to the test in final detail yet, so I think that will occur in the next couple of months. But certainly over the next 18 months we are going to be adding complexity, but it won't be until we've built the full test bed capability where we will have the ability to put more targets in flight almost simultaneously rather than just one and fire more interceptors than just one and then

put more decoys in to get the different geometries that will convince ourselves as well as our critics that we have an operationally viable system. So that's why the test bed is so important to us.

Senator WARNER. Senator, I have to interrupt. We have just a few minutes left. The Chairman suggested that we now adjourn the hearing and you can come back and resume your questioning. Would that be inconvenient?

Senator BILL NELSON. Oh, we have a vote? I'm sorry, I did not know that, Mr. Chairman.

Senator WARNER. These are good questions and I am listening.

Senator BILL NELSON. Mr. Chairman, may I just conclude by asking one simple question? When do you expect that full up test bed onto your present regime?

General KADISH. Between fiscal year 2004 and 2006.

Senator BILL NELSON. Thank you, Mr. Chairman.

Senator WARNER. We will stand in adjournment. [Recess.]

Chairman LEVIN. We will be back in session. Let me ask this question of both of you. It has to do with when that test bed becomes operational. You said, Mr. Secretary, you hope, it is your intent and your hope, that it become operational as quickly as possible. It is your hope—I guess everybody's hope—that the tests succeed. It is also, it seems to me then, the question comes back as to what is the change which would need to be made to make that an operational system. General Kadish said before that there are some changes that would need to be made. You characterize those as software changes, I believe, Mr. Secretary.

Secretary WOLFOWITZ. That's my understanding from hearing the General speaking. Yes.

Chairman LEVIN. Is that a difficult thing to do—to make those software changes? Does that have to be tested or is it something that we assume could be done quite readily?

General KADISH. Well, I hesitate to say it's only a software change because those things are monumental in our business but the issue is that I wouldn't expect the changes to be difficult to implement. However, in keeping with the philosophy of making sure we test like we use it in this test bed, we would have to, at some point, start testing those command relationships and making sure when you turn the switch, the right thing happens. So, what I said earlier about having detailed plans to do that, I would expect us to start thinking about how to do that over the next year to 18 months and even beyond that and that plans will change over time based on what we discover. So, that's why it's difficult for me to say precisely right now exactly what it will take to turn it operational.

Chairman LEVIN. But it will take that?

General KADISH. It will at least take that.

Chairman LEVIN. It's our intent to have that tested so that it is ready when the other elements of an operational system are ready to go as well.

General KADISH. Well, again, this is where it gets imprecise because if you recall, last year, Senator, we were doing things concurrently and you questioned me very closely on why the high risk on a concurrent program. This program doesn't have that now. We wait to make that decision—to actually produce the system that we intend to deploy based on more concrete test data and performance

of the program. So, at some point over the next 3 to 4 years I would expect, based on the progress of our test bed testing, to take to the Secretary and the decisionmakers options every year as to whether or not we want to start one of those concurrent programs. In that regard, we would use what we know in the test bed and that test bed capability then could provide only an interim capability on our way to a larger system.

Chairman LEVIN. But the interim system, which has been called a rudimentary capability, is that the way you're using it basically?

General KADISH. That's the best term we've come up with to date.

Chairman LEVIN. But the words rudimentary or primitive or interim all are intended—

General KADISH. Not the final system.

Chairman LEVIN. But they're all intended to describe a system which has operational capability and is intended to have minimum or modest operational capability. Is that accurate?

General KADISH. That's one of the things it would do. Yes. There are two primary functions—test bed first and then the residual capability it gives you.

Chairman LEVIN. But that residual capability, that operational capability is one of the purposes here. Is that not correct?

General KADISH. That's correct.

Chairman LEVIN. You've said, Mr. Secretary, that it is your intent that that be achieved as quickly as possible. Is that correct? I just want to be real clear here.

Secretary WOLFOWITZ. Yes.

Chairman LEVIN. I want to talk about the Cobra Dane radar for a few minutes. In your point paper that was provided to this committee, you said that an upgraded Cobra Dane radar, "may have some ABM radar capability." But in any operational system we anticipate that a new X-band radar Shemya would be required to provide needed discrimination even with all possible upgrades to Cobra Dane. So, are you then saying that Cobra Dane will provide that contingency capability as early as 2004?

General KADISH. If I understand the question, I believe the answer will be yes because it's an early warning radar and it only functions as an early warning radar. One of the issues is the countermeasure problem for any midcourse system that we need X-band for. So, the capability is very basic and as we've been describing it, rudimentary.

Chairman LEVIN. But Cobra Dane will provide useful contingency capability?

General KADISH. That's what our belief is today.

Chairman LEVIN. Mr. Secretary, this is a bit unrelated to the series of questions that I want to keep pursuing here but I have been troubled by it because a number of times in the last few hearings, I think at least twice, it has been stated that you are on a commission that concluded that we needed to deploy a national missile defense system. You have not said that that was not accurate.

Secretary WOLFOWITZ. That is not what the commission concluded.

Chairman LEVIN. I think it would have been useful for you when that statement is made as it has been repeatedly here for you to say when it's your turn to respond to the question that in fact that

is not what the commission recommended. I would just ask you in the future that you clarify.

Secretary WOLFOWITZ. That's a fair point, Senator.

Chairman LEVIN. In your statement today, Mr. Secretary, on page 3 at the top, you make the following statement. Well, first let me go to the bottom of page 2. "The Department's ABM compliance review group has been directed to identify ABM Treaty issues within 10 working days of receiving the plans for new development of treaty events. That process is already under way." When did that begin?

Secretary WOLFOWITZ. This new procedure, I think, was instituted by Under Secretary Aldridge within the last week or 2.

Chairman LEVIN. Then at the top of the next page you say the following: "The Secretary and I will be informed of whether the planned test bed use of Aegis systems in future integrated flight tests or concurrent operation of ABM and air defense radars in next February's tests are significant treaty violations." Then you made reference to those three fact sheets that are made part of the record. You say here, you're going to be informed as to whether they are significant treaty violations. Are you going to distinguish between significant treaty problems and just treaty problems? Is that word significant supposed to tell us that you will say that if it's a treaty problem or a treaty violation in your judgment or the judgment of that compliance review group that then there's going to be another test. Is it a significant violation?

Secretary WOLFOWITZ. It doesn't say significant violation. It's significant problem and I have to read in the mind of the authors who gave me the phrase. I think what it means is if it's a prospective violation, it is a significant problem. If you can't guarantee because of the way these things change and alter over time that there are no treaty problems, but it certainly better mean it's what I took it to mean that if there's any serious prospect of a violation that this is going to surface early.

Chairman LEVIN. That a violation is a violation. You're not trying to distinguish between a serious and a non-serious violation?

Secretary WOLFOWITZ. Not at all.

Chairman LEVIN. Alright. The next sentence, which I found to be a really interesting sentence, I must tell you. "This process will permit us to take them," and I assume that is referring to the treaty problems?

Secretary WOLFOWITZ. Yes.

Chairman LEVIN. "Into account as early as possible as we pursue our negotiations with Russia on a new strategic framework." What do you mean by take into account?

Secretary WOLFOWITZ. I mean that it becomes part of the considerations that the Secretary and the President have to make. In their discussions with the Russians, it becomes something we have to take into account in our consultations with you and other members of Congress. It becomes something we have to take into account in moving forward with the program. There are different ways to go with these issues depending on the character they raise and so, there's not a—until you see the forum in which the issue specifically arises, it's hard to say exactly which way you'll go with it.

Chairman LEVIN. See, what I'm struggling with is whether or not the administration, the President, has decided that if modifications cannot be agreed to with Russia, the decision has already been made to withdraw from the treaty. That's what I'm trying to figure out. Has it?

Secretary WOLFOWITZ. I think there is a decision that at some point, and I'm not sure—I think the point is a crucial question—that at some point if we can't get modifications that allow us to proceed with missile defense, we will withdraw from the treaty. The question is at what point and I don't think there's been a decision about what point.

Chairman LEVIN. To that point, even if all of this testing worked out this year may not come this year?

Secretary WOLFOWITZ. I guess the most I can say is this phrase that there seems to be an agreement with the administration that we're talking about months and not years. I mean, I think you yourself would say at some point you would withdraw from the treaty.

Chairman LEVIN. I might. Not would. That's the whole difference. You just put your finger right on it.

Secretary WOLFOWITZ. OK.

Chairman LEVIN. I read this before and Senator Warner very appropriately asked for later comments to the administration that if Russia refuses the changes we propose, we will give prompt notice under the provisions of the treaty that we can no longer be a party to it. What you're telling us is that it may or may not be the situation now because it may not be such prompt notice. Now you're saying that at some point. That's fine with me, by the way, because that begins to show a little complexity in how to approach a—probably the most significant security decision we're going to make, which is if we can't modify the treaty, whether we're going to, in fact, withdraw from it. What I'm trying to see is whether or not there are in fact the beginnings of flexibility, that opening to considering the ramifications of withdrawal.

The impact on our security of withdrawal from a treaty is a factor to be considered. I was glad to hear you answer Senator Warner's question about if, in fact, the modifications cannot be agreed to whether you would come back to Congress in a consultative process and your answer was yes. That, to me, means that what you do in that circumstance is subject to consultation. That, to me, means you have not made a final decision; that no matter what the circumstances are; no matter what the fallout out is; no matter what the reaction is; no matter what the actions which we would then expect from Russia and China are; no matter what anything, that you're going to promptly withdraw from the treaty. Instead, if you're going to be consulting with us, and I would welcome that, I gotta tell you, before you make the decision that you're going to withdraw, I view that as progress. I don't want to look to see something that isn't there but I took a little bit of heart from your answer to Senator Warner's question because it's different. It's a different kind of a spirit to say that if Russia refuses the changes we propose, we will consult with Congress and come back to you as to what then, what actions, we're going to do. If those actions are already decided, if you've already decided that if Russia doesn't agree

to the changes that you're then going to give prompt notice under the provisions of the treaty that you're withdrawing from it, that puts us in a very different position. So, you can comment on that or not.

Secretary WOLFOWITZ. Let me say a great deal of complexity has been added to the President's position since the Citadel speech that you quoted that from and even last year in May when he made his statement about a new approach to nuclear weapons and deterrence talked in quite elaboration about the importance of a new approach to offensive retaliatory forces as well. I mean, that already is a very major layer of complexity added to what we're trying to present. When we talk about a new framework with Russia, we're talking about something that actually goes beyond missile defense and beyond nuclear weapons and to incorporate a much broader view of security and one that I think is appropriate to this era. So, we are very much trying to take a lot of people's views into account.

Certainly, Congress is our ally but certainly also the Russians and I do think that—I made a comment earlier which I think you may have taken as dismissive that I didn't think this rudimentary capability in Alaska would keep a Russian military planner awake even for a minute. I don't believe it would. But I in no way mean to dismiss the importance of the ABM Treaty as something that unfortunately became the centerpiece of U.S.-Soviet relations. We'd like to have a different centerpiece for U.S.-Russian relations and that's what we're working on constructing. It's going to take work and we need to work with Congress in doing it.

Chairman LEVIN. Well, that's more than welcome but the complexity, again, that I'm referring to, the layer of complexity that I'm referring to, is the question of whether to withdraw. The question that I'm trying to figure out the answer to is whether or not that decision has been made to promptly withdraw from this treaty in the event—or just a decision made to withdraw from this treaty—in the event that the modifications cannot be made. If, in fact, there's true consultation that is going to take place on that question before the decision is made, that puts us in one situation. If, in fact, the decision has been made that there's going to be a prompt withdrawal, in the event modifications cannot be achieved, that seems to me to put us in a different situation in looking at your budget request. So, I guess I'll try the question again. Is it your judgment that the decision has been made in the event modifications cannot be achieved to promptly withdraw from the ABM Treaty?

Secretary WOLFOWITZ. I think we are at the point, as the phrase is said, that it's a matter of months, not years, before we reach that point. Now, does that—

Chairman LEVIN. Reach the point of deciding whether or reach the point of withdrawing?

Secretary WOLFOWITZ. Reach the point of deciding that we would have to.

Chairman LEVIN. Reach the point of deciding later on? You have not now decided? Look, to me this is a very important little conversation we're having here. I don't know; I can't speak for others, but to me it's a very important conversation. It is not something

which is splitting hairs. It is something which goes to the heart of a very important issue because we have a responsibility, as do you, to defend this country, the security, and to protect and defend America. We want to, it seems to me, make sure we don't create a greater problem by addressing the problem over here in a North Korean threat and create a bigger problem with a larger number of nuclear weapons on Russian or Chinese soil. The response can leave us less secure if we don't do this right. I think most of us would like to see a new framework. I really believe we'd like to see a new cooperative framework. There's no difference in that regard. The question is how best to achieve it and whether it's best to achieve it by telling Russia we're going to withdraw if there's no modification, or to tell Russia we may withdraw if there's no modification, depending on how we perceive our security circumstances at the moment that we think we have something that might be workable. Those are very different issues and very different ways to phrase an approach. So, I don't want to, unless you'd like to comment further on what I just said, I'll just go on to a couple other questions and then turn it over to Senator Warner. Do you want to add anything.

Secretary WOLFOWITZ. I don't think I can add.

Chairman LEVIN. In the statement which was given to the media last Wednesday the following sentence appears. The administration made this following statement: "As we have informed our allies and Russia, we expect our RDT&E efforts will conflict with the ABM Treaty limitations in a matter of months, not years." When was Russia informed that we expect our RDT&E efforts to conflict with the ABM Treaty limitations in a matter of months? When did we notify them?

Secretary WOLFOWITZ. I'm not sure, Senator. I'll have to get that for the record.

Chairman LEVIN. I'd appreciate that.

[The information referred to follows:]

During frequent high-level discussions throughout 2001 we informed the Russians that in pursuing the best options available for defense of our territory, our allies, and our friends, we would come into conflict with the ABM Treaty. We further communicated that we did not intend to conduct tests solely designed to exceed treaty constraints, but neither could we design tests that conformed to the treaty and still build the most effective missile defense system.

Senator Warner.

Senator WARNER. Thank you, Mr. Chairman. Secretary Wolfowitz, I listened very carefully to your response to Senator Reed and your responses to his question about a violation of a treaty, the ABM Treaty, were very succinct, very clear and consistent with what you have said in 2 days of testimony but tightly packaged in one response. I wrote it down as best I could quickly. You simply said, we will not violate the ABM Treaty, isn't that correct?

Secretary WOLFOWITZ. That's correct, Senator.

Senator WARNER. Fine. To me that puts to one side very many concerns of others and, second, you indicated that you would further consult with Congress, if the option—well, let me put it this way. It would be my hope that at some point in time this statement could somehow be embraced by the administration. I've just sort of put it together. That the United States will continue its consulta-

tions with our allies, negotiations with Russia, and indeed I support the President having indicated that withdrawal is an option, that he is commander in chief of our forces and he must consider should he be unable to structure a new framework and/or the option as we discussed earlier of amendments. But that in his final decision he would have further consultation as necessary he deems with allies and with Congress before exercising the treaty provision of withdrawal. Now, it would be my hope that somehow words could be crafted along those lines. I'll just leave it at that.

Further to General Kadish, a legitimate concern has been made that we, the United States, prove the technology before deployment and I guess I have been around weapons system about as long as anybody up here in Congress—30 years plus. Clearly, a deployment decision of a new weapons system or new defense against a weapon would only be done after the full test evaluation, all the various steps and benchmarks were taken. Then it's certified to the Secretary of Defense. Am I not correct in that?

Secretary WOLFOWITZ. That's the way we normally do our major procurement programs. However, there is precedent and I think it's embedded in some of our thinking here, that we may want to take decisions a little bit earlier and take some risk in this. No defense system is ever perfect even if it's fully operationally tested. So, we may want to do some things concurrently that would advance the capability with a little bit of risk.

Senator WARNER. I don't think that's any significant departure, in my judgment, from what we have done because I think there's several concerns that one, we would be foolishly throwing money at the system were we to deploy it without having gone through the normal sequence of benchmarks prior to certification that the system can be employed and that we would take it without pursuing which I fervently believe our President will do, consultation with allies, negotiations with Russia and the like. All of these things. So, I think the testimony today has gone a long way to clearly lay a foundation of fact that this administration is proceeding in a prudent manner with regard to reaching at some future point in time a deployment decision. It has met my satisfaction. I hope it has met those of others.

Mr. Chairman, I will submit a series of questions for the record. We are way over our time estimates here and you and I have other commitments with regard to several questions on the treaty itself and the necessity. I just think the general public fully understands that this treaty constrains the United States from developing missile defenses cooperatively with other allies and indeed Russia. Am I not correct on that?

Secretary WOLFOWITZ. That's correct, Senator.

Senator WARNER. That's such a fundamental proposition because I think basically the world wants to see a greater framework of security against the threat of these missiles and that at some point in time our President, not unlike what President Ronald Reagan did, would offer to share technology and to allow this greater security to not only benefit the United States and our allies but Russia and indeed some others. So, I think those fundamentals have to be pointed out in very simple, plain, good old fashioned American English language. I intend to do just that but I commend both of

you today. I think this hearing has been a very significant step forward in meeting the challenge of legitimate concerns of others with regard to what this administration is doing to protect our fundamental security against an overgrowing threat of missile technology. I'm glad that you said today very clearly, Mr. Secretary, that unless we come to grips with a defense against the threats of missiles, whether they're ballistic or intermediate, it renders almost useless the entire inventory of weapons that we now have and seriously impairs the ability of our Nation to help other nations when their security could be challenged by a common enemy. Because a threat against our Nation, should we employ forces to save another nation, could be seriously put in jeopardy if we were threatened with retaliation by some nation against us should do that by use of this missile.

We also have to understand that many nations are putting their limited resources behind acquiring this capability because those limited resources do not enable them to have the conventional forces and other forces to promulgate their foreign policy even though that foreign policy may be antithetical to our own. This is a very simple, less costly means by which to enter the world of politics in foreign policy and we've got to prepare ourselves to defend against it.

I thank both of you.

Chairman LEVIN. General Kadish, today I guess, you prepared these three sheets for us, or the Department prepared these three sheets for us, and they're now part of the record. When you told the committee on June 13 that none of the recommended activities would cause a violation of the ABM Treaty in fiscal year 2002, were any of these activities on these three sheets included in the recommendations at that time?

General KADISH. I think they're all being developed and subject to the normal look by those in compliance review. As I stated and in qualifying that it was all subject to the compliance process.

Chairman LEVIN. Have there been any changes in your proposed activities since June 13.

General KADISH. Oh yes, Senator. Lots of changes.

Chairman LEVIN. Since June 13?

General KADISH. Yes, sir and that is part of the problem we have is that there's always changes to this process and as stated earlier in the hearing it wasn't until Friday, the 13th, that we got a modification to our latest test. So, that is why it is so difficult for us to be precise, at least for me to be precise, on this because planning at very low levels in our organization on the construction projects could change a date by months. That has treaty significance.

Chairman LEVIN. You gave us a booklet on June 13 laying out what your program was and what I would appreciate your doing for the record is telling us in what specific ways these three sheets differ from that presentation which you made to us on June 13.

General KADISH. We will attempt to do that.

Senator WARNER. Mr. Chairman, might I also ask unanimous consent that I have obtained clearance, security clearance, on the June 13 testimony which further amplifies General Kadish's reply to your questions and the questions of others. I would ask unani-

mous consent that that be placed in today's record. I presume this would be an appropriate juncture.

Chairman LEVIN. It would be. It would be very helpful, as a matter of fact. I appreciate that.

[The information referred to follows:]

The June 13 booklet was provided to provide information about the status of the program, not to provide information related to treaty issues. The fact sheets provided on July 17 set forth information related more specifically to treaty issues. From June 13 to July 17, the planning the testing and development program continued, decisions were made and the fact sheets document some of those decisions. The fact sheets are attached.

THE MISSILE DEFENSE SYSTEM TEST BED

Plans and Purpose

- **Test Bed as a Whole:** Allows overall system performance testing to occur using more realistic threat trajectories and allowing more complex engagement scenarios.
- **Launchers:**
 - Construction at Fort Greely, AK (5 silos) will be in the spring or early summer next year.
 - Once complete, the five silos will allow tests of operational command and control. communications, and the capability of the long haul communications network; rehearsal of maintenance and upkeep processes; and assessment of the adverse effects of Arctic conditions at a potential operational site.
- The two Kodiak, AK launcher silos to be constructed in the spring/summer of 2003 will allow higher closing velocities, more realistic test geometries, and multiple engagements.
- **Radars:** At least three large phased-array radars will be part of the Missile Defense System Test Bed: Cobra Dane (Shemya, AK), Beale, CA, and a new X-Band in the mid-Pacific.
- Cobra Dane currently collects data on ballistic missile launches from Russia and also has the mission of early warning and space track. An upgraded Cobra Dane radar will provide enhanced early warning and may have some ABM radar capability.
- Initial upgrades are software modifications like those ongoing for the Beale, CA early warning radar. No changes to the radar's hardware are currently planned.
- Boeing is investigating what additional upgrades to Cobra Dane might be appropriate, and when. Possibilities range from mere software upgrades to significant physical modifications. We will know our options this fall.
- In any operational system, we anticipate that the X-Band radar at Shemya would be required to provide needed discrimination, even with all possible upgrades to Cobra Dane.
- Beale software modifications will not raise ABM Treaty issues before FY04.
- Current plans contemplate constructing an X-Band radar in the mid-Pacific in FY06.
- In-Flight Interceptor Communications Systems (IFICS) to be constructed next spring/summer may raise ABM Treaty issues depending on whether they are determined to be subcomponents of an ABM radar.

AEGIS SPY-I TRACKING A STRATEGIC BALLISTIC MISSILE

Plans and Purpose

- Plans to use an AEGIS SPY -I radar to track long-range ballistic missiles are currently under development and are only at a preliminary stage.
- The most likely near-term scenario is for an unmodified AEGIS SPY -I radar to track an outgoing target immediately after its launch from Vandenberg Air Force Base during an ABM intercept attempt at Kwajalein Missile Range.
- This test would provide initial data for assessing the basic capability of the AEGIS SPY -I radar to track long-range targets that will assist in formulating AEGIS development options.
- The AEGIS SPY -I radar may be connected to the test's command, control and data communications backbone.
- The SPY -I radar, however, would likely not contribute to the data used to complete the intercept (i.e., it will not help guide the interceptor).
- Future (and currently unprogrammed) plans might include an AEGIS SPY -I radar:
 - Collecting intercept data at the ABM test range during ABM testing.
 - Providing real-time data to the U.S. strategic early warning system.
 - Providing data to assist an Integrated Flight Test intercept attempt.
 - The AEGIS SPY -I radar might also participate in testing at the Missile Defense System Test Bed using targets with various ranges and velocities.
- We eventually expect to integrate a modified, more capable version of the AEGIS SPY -I radar into tests of our boost and ascent phase elements.

SYSTEMS INTEGRATION TEST II (SIT II) COMBINING DATA FROM ABM AND NON-ABM RADARS

Plans and Purpose

- We will conduct a short-range missile defense test beginning next February.
- Three targets will be tracked by two AEGIS SPY -I radars, a Patriot PAC-3 radar and the THAAD UOES radar.
- An ABM radar located at Kwajalein Missile Range will also track each target, but will not communicate with any of the other radars.
- During the flight test of at least one target missile, a Patriot P AC-3 missile system will attempt an intercept.
- The ABM radar will obtain data supporting all U.S. TMD programs. This is critical information as to how both our interceptor and the threat targets behave, as well as unique information measuring the lethality of the intercepts. Using the ABM radar will significantly improve the quality of the information gained from the test.

Chairman LEVIN. First, let me say relative to Senator's Warner's comments about a formulation of a position that I commended to you. It's something I've been urging for quite some time, which is that the President, rather than saying he's going to withdraw from the treaty if modifications are not agreed to, state that he's going to consider the option to withdraw in that event. It's a very significant statement and it's significantly better, I believe, both in terms of trying to obtain an agreement but also in terms of working with Congress. This is really what the position has been of Congress for some time, at least in the Senate. Senator Warner, then Senator Cohen, Senator Nunn and I talked about getting ourselves in a position to have capability so that a president could determine whether or not to withdraw based on the nature of the threat, based on whether or not overall we'd be more secure with a withdrawal, based on operational effectiveness, based on impact on arms reductions, based on cost effectiveness.

Those factors were put into a bill that the four of us worked on in the mid-1990s so that the President would be in a position to decide whether or not to exercise the treaty provision relative to withdrawal. In that formulation that Senator Warner just made about the President stating that if modifications were not available, and were not achievable, that then he would consider that option, it seems to me is consistent with the position that we have wanted each President to be in since we've started down the road of research and development of a missile defense.

In terms of wanting another framework, I think everyone of us would like to see a new framework. But we also would like to see a new framework in place before the old one is destroyed unilaterally—before it's torn down. That is going to take some real effort and it's worth trying for but it's very different from saying we're going to tear down the old before we have a new one—to say we

would like to get to a new one and here's why. That's a matter of persuading folks that it is in their interest and our interest to be able to defend against that rogue state or that accidental launch. Both of those are useful. But it also means that we don't want to do it in a way which could put us in a less secure position. That would actually add to our insecurity because of the unilateral action which then precipitates a response on the part of Russia and China to overcome what they consider to be a threat to their security. We may not understand why it's a threat to their security but if they feel that way, they're going to act. They're going to respond if they feel threatened by our unilateral action. We should at least factor that into our thinking—not be stymied by it, not give anyone a veto—just be aware of what that response is and consider whether or not, given what the likely response might be, we would be left in a more or less secure position.

Thank you. You both have been very helpful. These have been long hearings, but helpful hearings. We will keep the record open for 24 hours for those of our colleagues that have additional questions. There is material you're going to be submitting for the record. We stand adjourned.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR CARL LEVIN

ALLIES, RUSSIA AND CHINA

1. Senator LEVIN. Secretary Wolfowitz, the administration released a paper during the week of July 9, 2001 that stated that it had "informed our allies and Russia" of its expectation that the ballistic missile program will "conflict" with the ABM Treaty in months, not years.

What exactly has the administration told our allies and Russia? When did you tell them?

Secretary WOLFOWITZ. We have informed them on several occasions that in pursuing the best options available for defense of our territory, our allies, and our friends, we will come into conflict with the ABM Treaty in months, not years. We communicated that we do not intend to conduct tests solely designed to exceed Treaty constraints, nor do we intend to design tests to conform to, or stay within the confines of the Treaty.

Additionally, we have told them that we hope and expect to have reached an understanding with Russia by the time our development program bumps up against the constraints of the ABM Treaty, and that we would prefer a cooperative outcome. In this context, we have told our friends and allies that we intend to continue our consultations with them as our discussions with Russia proceed.

2. Senator LEVIN. Secretary Wolfowitz, what, if anything, has the administration told China?

Secretary WOLFOWITZ. We have communicated the same information to China.

3. Senator LEVIN. Secretary Wolfowitz, did the administration tell these nations that you do not plan on modifying the ABM Treaty, but rather to move away from it in the hope of a new framework?

Secretary WOLFOWITZ. We have informed these nations that we plan to move beyond the constraints of the 1972 ABM Treaty—which the President has called "an artifact of the Cold War confrontation" that prevents us from acquiring the capabilities we need to deter and defend against new threats and that perpetuates an adversarial relationship with Russia.

4. Senator LEVIN. Secretary Wolfowitz, has the administration considered, or ruled out, the option of deploying long-range interceptor missiles in NATO or other allied nations? If so, has the administration discussed such an option with our allies?

Secretary WOLFOWITZ. As the President has stated, missile defenses will be designed to protect the United States, deployed forces, and its friends and allies. To

accomplish this mission, the Department of Defense is exploring a wide range of technologies and basing modes that could contribute to an effective missile defense program. Therefore, we have not ruled out the possibility of needing to deploy interceptors on allied territory, though no decisions have been made. Over the past several months we have been involved in an intense dialogue with our allies and friends on missile defense issues. In these discussions, a number of allies have expressed interest in participating in U.S. missile defense plans. We expect these discussions to continue and expand.

STRATEGIC FRAMEWORK

5. Senator LEVIN. Secretary Wolfowitz, your prepared statement from July 12 stated: "We hope and expect to have reached an understanding with Russia by the time our development program bumps up against the constraints of the ABM Treaty."

Why do you expect to have reached agreement with Russia within this near term period, which you described elsewhere in your statement as "in months rather than in years"? Are there any indications from the Russians that they are willing to reach agreement on a new strategic framework, or to amend the ABM Treaty?

Secretary WOLFOWITZ. My reason for optimism is that I think we have a fundamentally different relationship with Russia than we had with the Soviet Union. I do not think that the Russians have to lay awake nights worrying about our attacking them with nuclear missiles, nor do we need to worry about the Russians attacking us. What the Russians are looking for is a new framework of relations that addresses the real security needs of this era. Both the United States and Russia have a very substantial common interest in maintaining stability in Europe and Asia. Working together on stabilizing those critical areas of the world is the cornerstone of strategic stability today. I believe that as we deepen our strategic framework discussions with the Russians—which are well underway—we will begin to make some progress.

6. Senator LEVIN. Secretary Wolfowitz, what is the U.S. proposing for a strategic framework with Russia on the following elements: offensive nuclear forces, defensive forces, threat reduction and nonproliferation?

Secretary WOLFOWITZ. President Bush has called for the development of a new strategic relationship with Russia based on openness, mutual confidence and real opportunities for cooperation, which recognize the fundamental changes in the international security environment.

In the missile defense area, we are prepared to examine a range of cooperative activities with Russia such as the sharing of early warning information, sensor technology, and expansion of our existing U.S.-Russia Theatre Missile Defense (TMD) Exercise. With regard to offensive nuclear forces, we see the new framework including substantial reductions in offensive nuclear forces.

In the threat reduction area, we are prepared to assist in deactivating additional nuclear warheads, destroying strategic delivery systems, and improving accountability, storage and transport security for deactivated warheads. With regard to nonproliferation, the U.S. and Russia could establish a defense-to-defense dialogue on proliferation concerns and the challenges to regional and global security posed by the acquisition of longer-range missiles and WMD in regions of instability. We could also work together in areas of shared proliferation concern to identify approaches that can reduce the risks of instability.

LEGAL BASIS FOR R&D FUNDING OF A MILITARY CONSTRUCTION PROJECT

7. Senator LEVIN. Secretary Wolfowitz, the Defense Department budget proposal for fiscal year 2002 requests research and development funding to construct five missile silos at Fort Greely, Alaska for NMD interceptor test missiles. Section 2353 of Title 10, U.S. Code, prohibits the use of research and development funding for "new construction," and the five proposed silos are clearly "new construction." The Department has not requested, and Congress has not approved, military construction funds specifically for building these new silos at Fort Greely.

What is the legal authority for requesting research and development funding for this new construction?

Section 2802 of Title 10, U.S. Code, states that military construction projects require an authorization in law. They also require an appropriation. If you are seeking neither of these required elements for military construction funds for construction at Fort Greely, would the construction you propose conflict with the law?

General KADISH. The construction at Fort Greely, Alaska will be a portion of the Ballistic Missile Defense System Test Bed. Section 2353 of Title 10, United States Code authorizes construction and acquisition of research, developmental or test facilities needed for the performance of a research or development contract using Research, Development, Test and Evaluation (RDT&E) funds, provided that the facilities constructed do not have "general utility." Because some of the Ballistic Missile Defense System Test Bed facilities to be improved or constructed may have general utility, the Department of Defense has proposed new legislation to establish that RDT&E funds may lawfully be used for the purpose of constructing the Ballistic Missile Defense System Test Bed.

The Ballistic Missile Defense Organization is proceeding in fiscal year 2001 with site preparation work for the portion of the Ballistic Missile Defense System Test Bed located at Fort Greely, Alaska using the authorization and appropriations of the Fiscal Year 2001 National Defense Authorization Act and Fiscal Year 2001 Military Construction Appropriations Act. The Fiscal Year 2001 National Defense Authorization Act provided project authorization at unspecified worldwide locations in the amount of \$451,135,000. It also provided an authorization of appropriations for such military construction projects at unspecified worldwide locations in the amount of \$85,095,000. The Fiscal Year 2001 Military Construction Appropriations Act provided a lump sum appropriation for "Military Construction, Defense-Wide," of which the table in the accompanying conference report indicates \$85,095,000 was intended for "NMD Initial Deployment Facilities (Phase I)." It is critical to the initial deployment of a ballistic missile defense system for the United States that the Ballistic Missile Defense Organization provides for robust testing in an environment that resembles as closely as possible a realistic, operational environment. The construction of the Test Bed facility at Fort Greely is consistent with and is a necessary and prudent intermediate step toward the ultimate construction of an initial deployment facility at Fort Greely. Such activities comport with both the Fiscal Year 2001 National Defense Authorization Act and the Fiscal Year 2001 Military Construction Appropriations Act.

KODIAK AS AN ALTERNATIVE TO FORT GREELY

8. Senator LEVIN. General Kadish, you have indicated that you intend to launch test interceptors from Kodiak Island, but not Fort Greely, yet you propose putting test missile silos at both Kodiak Island and Fort Greely.

Would it be possible to just use Kodiak, and put as many test silos (and other assets) there as you are proposing to put at Kodiak and Greely combined? Why couldn't such test assets placed at Kodiak have just as much "residual operational capability" as those you plan to place at Fort Greely?

General KADISH. First, it is important to note that Kodiak could not provide as effective a missile defense as Fort Greely because the Kodiak silos would be ineffective against select and specific trajectories. Thus, Kodiak could not provide the same "residual operational capability."

As a launch site within a test bed, Kodiak has advantages, but even then, unlike Fort Greely, it could not allow for proving out and testing of operations in a realistic arctic environment. Silo construction, silo and interceptor maintenance procedures, system acceptance and turnover, training development, and system operations would all be different at Kodiak.

Kodiak has insufficient space for five silos, and there would be no room for growth should such a decision be taken. In addition, since Kodiak is not Federal land, it cannot assure the same force protection and physical security as Fort Greely. Site-specific facility designs have not been started, and environmental requirements are not complete for Kodiak, while they are approaching completion for Fort Greely.

Finally, it would be duplicative and wasteful to build the required communications and battle management infrastructure at both Fort Greely and Kodiak. These elements will be needed at Fort Greely for any operational system, so it would be cost prohibitive to construct test versions at Kodiak, as well.

9. Senator LEVIN. General Kadish, is there anything you can do with a silo at Fort Greely that is impossible to do with a silo at Kodiak?

General KADISH. Yes, Fort Greely can provide for proving out and testing of operations in a realistic arctic environment, while Kodiak cannot. Silo construction, silo and interceptor maintenance procedures, system acceptance and turnover, training development, and system operations would all be different at Kodiak.

In addition, since Kodiak is not Federal land, it cannot assure the same force protection and physical security as Fort Greely. Site-specific facility designs have not been started, and environmental requirements are not complete for Kodiak.

TEST MISSILES FOR LONG TERM TESTING

10. Senator LEVIN. General Kadish, you propose to build five test silos at Fort Greely and place test interceptors in them on a long-term basis for logistics and maintenance testing, to make sure electronics work, and that you understand everything you want to know about the missiles. There would be test missiles, rather than fully developed, tested and operationally deployed missiles. Is it typical for a missile test program like this to build 5 test missiles just to store them in silos and never fire them?

General KADISH. Although this is not a typical program, it is typical to build missiles for long-term storage testing in projected deployment climates as part of shelf-life reliability assessment programs. It is also typical to test missiles in the full range of expected deployment climates. In order to verify the functionality of a complex system such as this, and to launch and engage several missiles simultaneously, multiple silos are required. The test bed requires five silos to simulate a maximum Ground-Based Midcourse Missile Defense salvo. Five silos are also a reasonable sample to construct, load, and observe interceptors in an arctic environment.

11. Senator LEVIN. General Kadish, do we do such testing now at either Vandenberg Air Force Base or at the launch site at Kwajalein, where we have test silos for missile launches?

General KADISH. No. The target missile and ground-based interceptor launched from existing ranges are put in place a few weeks prior to the scheduled test execution date.

12. Senator LEVIN. General Kadish, do we now do this sort of thing anywhere else, where we basically deploy these missiles permanently just to test them for logistics and maintenance issues, knowing that they are not operational missiles?

General KADISH. Yes, we typically employ test missiles for logistical and interface verification purposes. For example, this testing approach was used for the Hawk missile system. A battery of Hawk missiles along with all complete operational support equipment was emplaced at Redstone Arsenal for the purpose of testing. All changes to the system and first article testing were performed on the battery of Hawk missiles.

The test bed missiles will not be operational and will be built to test out the interface and functionality of the ground based mid-course system, which is very complex. The missile along with functional Launch Site Components, Command Launch Equipment, and Environmental Control Systems will be stored for a period of years in the environment expected during deployment and sustainment. These missiles will eventually be removed from the silos at Fort Greely and taken to a test range for Live Fire Testing. This approach adds realism to the Reliability Test Program.

13. Senator LEVIN. General Kadish, do we do this sort of permanent testing deployment with any operational missiles; as opposed to developmental or surrogate test missiles, where we place them in silos or launchers for long periods for the exclusive purpose of testing them in logistics and maintenance issues?

General KADISH. No, it is not typical to permanently deploy operational missiles in a testing deployment. We do, however, conduct testing deployments and simulations for our ICBM forces at Vandenberg AFB and at their operational bases.

However, it is not unusual to construct and deploy permanent testing facilities when developing missile programs. For example, the U.S. ICBM program constructed permanent silos and support facilities for each type of ICBM developed. These facilities allowed the proving out of logistical, maintenance, and operational procedures prior to the system's deployment and construction of operational facilities. Many of these facilities remain in use to support the Follow-on Operational Test and Evaluation (FOT&E) of our current ICBM force.

Testing of operational ICBMs does occur at the operational base as well. Simulated Electronic Launch Minuteman (SELM) exercises isolated 10 missiles from the operational wing for a period of approximately 1 month. During these exercises, the Minuteman ICBMs are put through a series of ground tests and then given orders to launch. The missiles are safed to prevent the firing of the motors. These end-to-end tests help provide confidence in the force.

Yes, we typically employ test missiles for logistical and interface verification purposes. For example, this testing approach was used for the Hawk missile system. A battery of Hawk missiles along with all complete operational support equipment was emplaced at Redstone Arsenal for the purpose of testing. All changes to the system and first article testing were performed on the battery of Hawk missiles.

14. Senator LEVIN. General Kadish, how much funding is proposed in the fiscal year 2002 budget request for building the silos at Fort Greely?

General KADISH. Of the \$273.121 million programmed for the Ballistic Missile Defense test bed facilities construction, \$168.645 million is programmed for the Ground Based Interceptor. \$20.911 million of this amount is allocated to prepare Fort Greely for the five missile silos.

ENVIRONMENTAL IMPACT STATEMENT FOR FORT GREELY

15. Senator LEVIN. General Kadish, has an Environmental Impact Statement (EIS) been prepared in accordance with the requirements of the National Environmental Protection Act for the construction of the five proposed test silos and placement of interceptor missiles at Fort Greely?

General KADISH. Yes. The National Missile Defense (NMD) Deployment Final Environmental Impact Statement (EIS) was final December 15, 2000. One of the five alternative locations analyzed in the EIS for the construction of up to 100 NMD missile silos and placement of up to one hundred missiles was Fort Greely, AK. The Fort Greely portion of the Ballistic Missile Defense System test bed proposal is essentially a down-scoped version of the deployment proposal analyzed in the NMD Deployment EIS. Accordingly, the environmental consequences associated with the Fort Greely portion of the test bed proposal are not expected to differ materially from those already analyzed in that EIS, but are anticipated to be reduced in scope and intensity.

16. Senator LEVIN. General Kadish, if so, when was it completed and issued?

General KADISH. December 15, 2000.

17. Senator LEVIN. General Kadish, if so, please provide the committee with the relevant portions of the EIS that deal with the specific proposal to build five test silos and emplace test missiles at Fort Greely.

General KADISH. Relevant portions of sections 2, 3, and 4 are provided that analyze activities of like kind at Fort Greely. (Information retained in committee files.)

18. Senator LEVIN. General Kadish, has a Record of Decision been issued for this specific proposal to build five test silos and emplace five interceptor missiles in these silos? If so, please provide the committee with the relevant portions of the Record of Decision pertaining to this specific proposal.

General KADISH. No Record of Decision has been issued for the specific proposal to construct five test silos and emplace five interceptor missiles in these silos. BMDO would issue a Record of Decision before it awards a contract to begin test bed site preparation work. The relevant portions of a Record of Decision pertaining to this specific proposal would be provided to the committee upon its issue.

NOTE: A Record of Decision dated August 10, 2001 was signed and published in the August 15, 2001 Federal Register. Contract award date was August 18, 2001.

19. Senator LEVIN. General Kadish, was there a "Finding of No Significant Impact" for this specific construction proposal?

General KADISH. No. A "Finding of No Significant Impact" (FONSI) would not be issued for this specific construction proposal. In accordance with the implementing regulations of the National Environmental Policy Act (NEPA), a FONSI is issued in conjunction with an environmental assessment (EA) process, to document no significant impacts were identified for activities analyzed in the EA process. The NEPA process that analyzed the NMD activities at Fort Greely was an environmental impact statement (EIS).

COBRA DANE RADAR UPGRADE

20. Senator LEVIN. General Kadish, how much funding is included in the fiscal year 2002 budget to upgrade the Cobra Dane radar on Shemya? Precisely what activities are funded? According to your proposal, when would upgrade begin and when would it be completed?

General KADISH. The fiscal year 2002 budget contains \$55.0 million to begin the Cobra Dane radar upgrades on Shemya Island, AK. The effort would begin in fiscal year 2002 and be completed in fiscal year 2004. Boeing, the Prime Contractor, would upgrade the existing data processor, modify Midcourse Defense Segment software to accommodate L-Band system radar inputs (from Cobra Dane), provide for a SATCOM link to the BMC³ node at Fort Greely, and provide final integration and testing. In addition, the fiscal year 2002 construction requirements are \$44.566 million for facilities and power requirements upgrades at Eareckson Air Station.

21. Senator LEVIN. General Kadish, what is the missile defense test purpose for this proposed radar upgrade, and what would it do that the existing test range capability does not do?

General KADISH. The test approaches being considered include flying air-launched targets into the Cobra Dane's field of view. The air-launched targets provide realistic target opportunities for Cobra Dane and would allow interplay between the radar and BMC³. The use of Cobra Dane in such operationally representative test scenarios would provide test data that are relevant to evaluating system development concepts and performance against a wider range of test parameters. Additionally, employing Cobra Dane in the BMD test scenarios would allow the radar to utilize legacy capabilities against targets of opportunity. Existing prototype and surrogate radars at Kwajalein and Hawaii cannot provide for such realistic tests on realistic geometries.

22. Senator LEVIN. General Kadish, can the Cobra Dane radar, either now or after the proposed upgrade, see target missiles launched from Vandenberg Air Force Base or from Kodiak, Alaska?

General KADISH. No. None of the planned upgrades will change Cobra Dane's field of view to the point where it will detect targets launched from Vandenberg or Kodiak along their customary trajectories. Note that Cobra Dane is in the architecture as a surrogate for a forward deployed early warning radar. Shemya's geographic relationship to Vandenberg clearly precludes this function for Vandenberg launched targets. Cobra Dane's primary utility will involve air- or other mobile-launched targets.

23. Senator LEVIN. General Kadish, General Franklin told committee staff that the upgraded Cobra Dane radar would be able to look westward over the Pacific to track a Long-Range Air Launched Target that is under development. Do you have fiscal year 2002 funding proposed for development of an ICBM-class air launched target? If so, how much?

General KADISH. A specific request for funding of an Air Launched Target in fiscal year 2002 was not made. A study is currently underway to look at development of an increased target launch capability (payload and range). In fiscal year 2002, \$10 million has been requested for this study.

24. Senator LEVIN. General Kadish, when do you plan on first using this target in a test with the Cobra Dane radar?

General KADISH. The use of the Long-Range Air Launched Target is part of a study to improve testing. The planned use will be determined based on the results of that study.

25. Senator LEVIN. General Kadish, what will this target's range be during this test?

General KADISH. The desired target performance parameters will be a product of the study.

26. Senator LEVIN. General Kadish, since that target does not yet exist, and it may turn out not to be a long-range target, why is the Department requesting funding in fiscal year 2002 to upgrade the Cobra Dane radar?

General KADISH. The funding requested for the Cobra Dane radar in fiscal year 2002 will only initiate hardware and software upgrades. The Cobra Dane upgrade would assist in development of both the X-Band and upgraded early warning radar (UEWR) systems, which would be used in an operational ground-based midcourse defense. The Cobra Dane upgrades will also allow the BMD program to learn earlier about how such a radar and BMC³ interoperate. In addition, the short construction window at Shemya means that the time required to install and test the planned upgrades to the Cobra Dane radar and supporting facilities will require more than a single construction season to complete. It is therefore prudent to begin this activity as soon as possible.

27. Senator LEVIN. General Kadish, would the proposed Cobra Dane radar upgrade make sense if you did not build the five interceptor silos at Fort Greely? What is the connection between the upgrade of the Cobra Dane radar and building five silos at Fort Greely that will never launch test missiles?

General KADISH. Yes, the proposed Cobra Dane upgrades make sense even without the five planned silos at Fort Greely. Both the Cobra Dane radar and the five Fort Greely silos are part of the overall test bed architecture that is intended to allow more robust and realistic testing of the ground-based midcourse element of the BMD System.

QUESTIONS SUBMITTED BY SENATOR MAX CLELAND

PROGRAM MANAGEMENT

28. Senator CLELAND. General Kadish, according to the briefing you presented to the Senate Armed Services Committee on 13 June, the earliest, "high risk" deployment for the various missile defense systems under consideration are 2009 for Airborne Laser, 2010 for sea-based systems, and 2006 for a ground-based system designed to intercept missiles in mid-course. The only system whose earliest, high-risk deployment was claimed to be 2004 is the ground-based system designed to intercept missiles in the missile's terminal phase. Is this correct? I define the term "high risk" to mean that these programs have a probability for success that is lower than what is generally acceptable for defense programs, and that rushing these programs is likely to lead to expenditures and blind alleys that might be avoided with a more deliberate research and testing schedule. Is that correct?

General KADISH. You are correct regarding our planned fielding dates for the Airborne Laser, the Sea-based system and the Ground-based portion of the Mid-course segment. However, all of our programs have been restructured to support an earlier contingency capability in the 2004 timeframe.

By its very nature, building a ballistic missile defense is an extremely complex undertaking and is inherently high-risk. The ABL, Sea-based Mid-course, Ground-based Mid-course systems are all high-risk ventures in the traditional sense because they are all truly "state of the art" efforts. The Ballistic Missile Defense Program is as complex as any in our Nation's history. However, we intend our highly rigorous testing and risk-reduction efforts to prevent us from entering "blind alleys." We are dedicated to these testing and risk-reduction efforts and confident they will serve their intended purpose.

ADDITIONAL FUNDING FOR MISSILE DEFENSE

29. Senator CLELAND. Secretary Wolfowitz, are you aware that the military services have identified \$32.4 billion in requirements that are not funded in the administration's fiscal year 2002 budget amendment? In light of these very tangible unfunded requirements, how do you justify asking for an additional \$3 billion for missile defense when Saturday's test indicates that the current program, as funded last year and programmed for the next several years, is making progress?

Secretary WOLFOWITZ. The priority the Department places on missile defense reflects the current administration's understanding of the growing threat the United States faces from short-, medium-, and long-range ballistic missiles. While we are just beginning to field systems to reliably counter the shorter-range threats, there is still much work to be done before we will be in a position to deploy capabilities to protect U.S. and allied cities and troops against the emerging longer-range threats from rogue states, whose leaderships may use these offensive capabilities for purposes of terror, coercion, or aggression.

While we currently have deployed many systems to counter threats from the land, sea, and air, and we have initiatives and operations to take care of numerous other defense needs, today we have no capability against longer-range threats against the American population. Nor do we currently have a capability to defeat the medium- and intermediate threats that could threaten our troops and allied and friendly cities this decade. Much like the threat we expect to face, the Ballistic Missile Defense System we are endeavoring to deploy is unprecedented. The administration will pursue a robust missile defense research, development, test, and evaluation (RDT&E) program to acquire the capabilities to deploy limited, but effective missile defenses as soon as possible to protect the United States, our deployed forces, and our friends and allies. The proposed missile defense funding for fiscal year 2002 represents our commitment to developing a rigorous test program, which will be essential to our ability to determine which technologies and basing modes will be most effective

against what by all measures is a very dynamic threat. Early deployed capabilities may be expected to provide more protection than we currently have.

Missile defense technologies have been under development for years. Many of the technologies required to build an effective BMD System are in hand and are improving year by year. The challenge before missile defense developers is in engineering the system. We will increase our knowledge of system capabilities over time through our RDT&E activities, and especially our testing program. These activities will give us a sound understanding of the technological and engineering possibilities inherent in the system we intend to deploy.

BUDGET/ARCHITECTURE

30. Senator CLELAND. Secretary Wolfowitz, in testimony last Thursday, General Kadish stated that your missile defense proposal has no milestones by which to measure progress. At the Frontier Institute last Friday, Secretary Rumsfeld said that: "We don't have a proposed [missile defense] architecture. All we have is a series of . . . very interesting research and development and testing programs . . ." In fiscal year 2001, the entire Department of Defense spent \$9 billion on all basic research and development alone. How can you justify spending \$8 billion on missile defense if you have no milestones, requirements, or architecture in mind? If you don't know what you are going to do, how can you know what it will cost?

Secretary WOLFOWITZ. The Ballistic Missile Defense program includes funding for research, development, testing and procurement. Procurement activity and funding will be transferred to the Service responsible for the acquisition, and these programs—namely PAC-3 and Navy Area Defense—have traditional milestones. The remaining missile defense activity, which encompasses a significant majority of the funding, is for research, development, and testing, and is directed by the Ballistic Missile Defense Organization. There are no procurement activities in the current BMDO program, but there are decision points. The goal of the program is to have sufficient information at these decision points to determine whether we should proceed with procurement and deployment of particular systems. At this point, our plan is to test as robustly and rapidly as possible all systems under development so we can provide the necessary information to decisionmakers. Therefore, although there is no architecture, per se, there are distinct points at which we will measure progress.

NATIONAL MISSILE DEFENSE

31. Senator CLELAND. Secretary Wolfowitz, what specific missile defense-related activities will take place in Alaska in fiscal year 2001?

Has the Compliance Review Group or the DOD General Counsel ruled on whether each of these actions violate the ABM Treaty?

Were there any dissenting opinions expressed by the legal experts consulted on the legality of the preparations that you intend to carry out this year?

Are there any missile defense plans outside of Alaska in fiscal year 2001 which raise significant compliance issues with respect to the ABM Treaty? If so, please give us the views of the Compliance Review Group and General Counsel as well as any dissenting views on each such plan. Will you assure us that there will be no violations of the ABM Treaty during the remainder of fiscal year 2001? During fiscal year 2002?

Secretary WOLFOWITZ. In fiscal year 2001, BMDO is scheduled to begin site preparation activities, which will include clearing, excavating and grading the site at Ft. Greely, AK.

In accordance with the procedures set forth in DOD Directive 2060.1, the General Counsel for the Ballistic Missile Defense Organization reviewed the planned activities and determined that they did not reasonably raise any issue of compliance with the ABM Treaty. As permitted under the Directive, the Under Secretary of Defense for Acquisition, Technology and Logistics was informed of this determination.

No. The determination was based on the plain language of the relevant Treaty documents. Furthermore, the determination was well within the prior consensus of the legal community established during consideration of when construction of the Shemya radar would be considered to first violate the ABM Treaty.

There are no missile defense plans outside of Alaska in fiscal year 2001 which raise significant issues with respect to the ABM Treaty. The Secretary of Defense has assured Congress that the Department will comply with the law.

32. Senator CLELAND. General Kadish, is prep work on a missile test facility at Alaska being contracted for this year? What funds are to be used for this work? For what purpose were these funds authorized and appropriated?

General KADISH. Yes, work for the test bed is intended to be contracted in fiscal year 2001. BMDO notified Congress on 16 July 2001 of its intent to solicit a proposal and subsequently anticipates award of a construction contract for initial site preparation of a test bed at Fort Greely, Alaska, using the authority and appropriations provided in the Fiscal Year 2001 Military Construction (MILCON) Authorization and Appropriations Acts.

Congress authorized the Department of Defense Agencies to carry out a \$451.135 million MILCON project, for which Congress appropriated \$85.095 million in fiscal year 2001 for the National Missile Defense (NMD) Initial Deployment Facilities, Phase I.

The test bed is essentially a limited portion of the Fiscal Year 2001 NMD MILCON project, sized appropriately for a testing, not operational, mission. The site preparation work planned for Fort Greely in fiscal year 2001 will be a small portion of the same work authorized for the GBI site construction work. The site preparation contract is not expected to exceed \$9.0 million.

NOTE: The contract to begin site preparation work was awarded on August 18, 2001.

33. Senator CLELAND. General Kadish, the proposal to build interceptor silos at Fort Greely, Alaska, is part of a proposed expansion of the BMD test infrastructure. (a) Exactly what would those silos be for, and (b) what would they add to the test infrastructure that either doesn't exist elsewhere or could not exist elsewhere? (c) How much funding is proposed in the budget request for building the silos at Fort Greely? (About \$200 million) That sounds like a lot of money to spend in a single year on construction. (d) Given the short construction season in Alaska (I understand it's about 8 weeks), how do you plan to spend that much money in a single year, from a "standing start?"

General KADISH. The elements of the test bed at Fort Greely would allow us to test interceptors and associated command launch equipment in an operationally realistic environment. Operational aspects that will be tested include Battle Management, Command, Control, and Communications throughout the system, from radars and sensors in various parts of the world all the way to the silos, including critical digital message timing. Operations in an Arctic environment, such as silo construction, silo and interceptor maintenance procedures and planning and rehearsal for system acceptance and turnover, can be developed and tested in no other location, not even Kodiak.

The test bed requires five silos to simulate a maximum Ground-Based Midcourse Missile Defense salvo. Five silos are also a reasonable number to construct, load, and observe interceptors in an arctic environment. Other factors that were considered arise from the fact that Fort Greely is optimally suited to be a future deployment location. Because of this, environmental requirements and site specific facility plans are complete; enough land is available, both for the initial five silos and for a future expansion if authorized; and Federal ownership provides force protection and physical security.

Of the \$273.121 million programmed for the test bed facilities construction, \$168.645 million is programmed for the Ground Based Interceptor. \$20.911 million of this amount is allocated for the five missile silos at Fort Greely. The construction season for central Alaska is from approximately April through October. This totals about 28-32 weeks per year depending on weather delays. The first year's expenses include mobilization costs, procurement by the contractor for long lead items, and the costs for foundation work and enclosing the facilities. After enclosure of facilities, some inside work can continue into the winter season. It is anticipated and planned that all requested funds will be obligated during the fiscal year.

34. Senator CLELAND. General Kadish, your testimony from last week indicated that a test bed activity consisting of five test interceptors in silos at Fort Greely linked to an upgraded Cobra Dane radar could provide an emergency operational capability for limited missile defense. When does a test bed activity become an operational capability and what needs to happen to change its status? What is the difference between the two? What can a test facility do that an operational facility cannot do and vice versa? At what point would either activity conflict with the ABM Treaty?

General KADISH. The interceptors in silos at Fort Greely will be used to conduct realistic ground testing and gain experience working with a variety of different aspects of missile defense, including integration of critical system interfaces, mainte-

nance, security, and construction. These crucial aspects of developing our capability will not include operational command and control (C²) linked to the National Command Authority, but rather a test command and control configured for safety. The test bed could not become an operational capability until the operational C² infrastructure, which is part of the National Command Authority, is put into place and direction is given to make the site operational. The test facility will only launch interceptors from Kodiak and only after significant preparation. An emergency operational capability would be able to launch interceptors from Fort Greely if needed. Although ABM Treaty issues are not within my purview, I understand that the compliance questions have not yet been resolved.

35. Senator CLELAND. General Kadish, if Fort Greely is intended as a test bed site, is it correct that no test interceptors would be launched from Fort Greely, but instead the missiles would be stored there in silos, and that interceptor test launches would instead be conducted from Kodiak Island? Under what conditions, if any, would you launch interceptors from Fort Greely?

General KADISH. It is true that current plans call for test interceptors to be launched only from Kodiak Island. It would be desirable to be able to launch test missiles from Fort Greely. Investigations into the safety and environmental issues involved with future test launches from Fort Greely are ongoing. Under current plans, interceptors would be launched from Fort Greely only in an emergency.

36. Senator CLELAND. Secretary Wolfowitz, at the outset of this administration's defense review, we in Congress were assured that major defense program changes would be deferred until after the completion of the strategic review. That review is still ongoing. Notwithstanding congressional support for the previous administration's program of missile defense research and development, adding \$3 billion to that program is, by any definition, a major defense program change. Why has this administration selectively chosen to accelerate missile defense programs in violation of your own previously established guideline?

Secretary WOLFOWITZ. The Department initiated several major reviews at the outset of the administration. The defense strategy review is ongoing, and most major defense program changes will await the outcome of that review. The Department also initiated a missile defense review, which is completed, and the results briefed to Congress. Missile defense is one of the Administration's top priorities, and it was important to implement the results of the review as soon as possible. The budget increase request for missile defense was part of this implementation.

PROGRAM MANAGEMENT

37. Senator CLELAND. General Kadish, you have stated in your testimony that there are no milestones or other elements of major defense acquisition program architecture by which we can measure progress with the new missile defense approach you have proposed, but you have also indicated that you have "internal plans" that provide detail on the specific things for which the money is being requested. Provide for the record, and in as much detail as is available, the internal plans for spending the money you are asking for in the fiscal year 2002 budget request.

General KADISH. The Fiscal Year 2002 Amended Budget Submission has been delivered to Congress with additional program details. BMDO will monitor the development of our systems through disciplined, internal engineering and program management processes. The only change we are proposing is how the Department oversees our progress. In lieu of the formal Milestone review, which occurs at intervals often spanning several years, the Department is planning to review BMD at a senior level in a formal process on an annual basis. These incremental steps allow technologies that are proven successful to continue to mature or be accelerated and those that do not prove successful to be slowed or terminated.

At an oversight level, a senior executive council, chaired by the Deputy Secretary of Defense, will provide BMDO guidance and direction. The top-down oversight will enable BMDO to carry out our new approach with shorter lines of communication and authority. BMDO will have the flexibility to adjust program priorities and will support major annual reviews with the oversight council to refresh policy and strategic framework for program direction. During these annual reviews, the oversight council will make executive level decisions to deploy, accelerate, truncate or modify capabilities or elements of the Ballistic Missile Defense System, major programming decisions, and execution year adjustments. The review process will help make decisions to shape the evolving systems and allocate resources to optimally support mis-

sile defense. Congress will have insight into detailed spending plans through the budget submissions provided by the Department.

NATIONAL MISSILE DEFENSE DEPLOYMENT READINESS REVIEW

38. Senator CLELAND. General Kadish, many theater missile defense programs that were funded under BMDO last year have been broken out to the services in this budget request. Provide for the record the exact amount of money that was authorized and appropriated for Patriot, Theater High Altitude Air Defense, and Navy Area Wide program in the fiscal year 2001 Appropriations Act. Provide also the dollar amount of BMDO funding that you expect will have been spent, obligated, or otherwise committed for each of these programs as of 30 September 2001.

General KADISH. The appropriated and authorized funding is the same and is as follows:

[In millions of dollars]

		Expected Obligation Rate ¹ (Percent)
RD&E:		
PAC-3	81.016	99
Theater High Altitude Area Defense	549.945	97
Navy Area Program	274.234	96
Procurement:		
PAC-3	365.457	70
Theater High Altitude Area Defense	0.000	
Navy Area Program	0.000	
MILCON:		
PAC-3	0.000	
Theater High Altitude Area Defense	0.000	
Navy Area Program	0.000	
Total:		
PAC-3	446.473	N/A
Theater High Altitude Area Defense	549.945	N/A
Navy Area Program	274.234	N/A

¹ Obligation rates apply to the current program funding which differs from the authorized/appropriated funding position.

QUESTIONS SUBMITTED BY SENATOR MARY L. LANDRIEU

NATIONAL MISSILE DEFENSE READINESS REVIEW

39. Senator LANDRIEU. General Kadish, the National Missile Defense Deployment Readiness Review is critical of the current program. Specifically, it notes problems in situations with "phantom tracks" where interceptors were accidentally launched despite operator's attempts to override the system. It also indicates flight tests to date have been "dumbed down" by reducing the number of decoys and utilizing canned scenarios. Despite this, the system has met deployment readiness criteria. Specifically, "it has not achieved two intercepts nor demonstrated integrated system performance with a successful intercept." What steps are being taken to address the concerns expressed in this report?

General KADISH. The NMD Deployment Readiness Review evaluated the previous administration's National Missile Defense program, not the Ballistic Missile Defense program that is currently planned. The previous administration's plan was to undertake development and testing for three years, review the results and then determine whether to deploy over a three year period. The Deployment Readiness Review documented whether the previous administration's program had met its stated criteria supporting a decision to deploy. In contrast, the planned approach is a research, development, testing and evaluation effort that will allow more robust testing, including software testing.

It appears that the question is in fact referring to the DOT&E Report incident to the DRR process, which raised several valid points about testing which would be applicable to the current program. BMDO has taken several steps to address those concerns. The Battle Management Command, Control, and Communications (BMC³) software accurately correlates sensor data with good covariance estimates; however, duplicate tracks may temporarily be created in the system track file due to real-

world sensor uncertainty in reporting their track data covariance estimates to BMC³. The BMC³ software correlation process automatically recognizes and purges these temporary duplicate tracks within a few sensor-reporting cycles. It does not become "confused" as to which target cluster(s) to engage, since engagements are only planned against stable system tracks. This reported problem was a development maturity issue identified during earlier testing, and it has since been corrected.

Testing has not been simplified in order to guarantee success. Rather, we are ensuring that we know how to walk before we begin to run. Flight testing up to this point, as well as tests for the foreseeable future, has been designed to prove that hit-to-kill can work. Once we have confidence in the hit-to-kill approach, we will add more realistic countermeasures and employ more complex testing scenarios. Much of this testing is envisioned to be done with the proposed missile defense test bed, as laid out in the fiscal year 2002 budget request.

At the time of the Deployment Readiness Review (DRR), we had achieved only one intercept, and that one intercept did not demonstrate a fully integrated system test, as originally planned; however, the one intercept demonstrated the feasibility and effectiveness of hit-to-kill technology. Also, in each flight test, we have met many of our test objectives and this has added to the understanding of how the system will perform. At DRR, ground and flight tests had demonstrated about 93 percent of the critical engagement functions and had shown the ability to integrate these elements. The failures that occurred in Integrated Flight Test (IFT)-4 and IFT-5 reflect problems in basic engineering and fabrication rather than underlying NMD technology or design.

40. Senator LANDRIEU. General Kadish, when do you expect system maturation and test evaluation to arrive at a point where we need to commit to system deployment in a way which would violate the ABM Treaty as it is written today?

General KADISH. Months, not years.

ABM TREATY VIOLATION

41. Senator LANDRIEU. General Kadish, there has been much discussion before this committee on the subject of ABM Treaty violation and the fiscal year 2002 budget. We keep hearing different things from different witnesses. Can you definitively state that the missile defense program for fiscal year 2002, to include the test plan and proposed range expansion to Alaska, will not violate the ABM Treaty? If not, when can you provide this committee with that information?

General KADISH. It is not known at this time whether the referred to activities are consistent with the ABM Treaty. We will inform Congress when a final recommendation by the ABM Treaty Compliance Review Group has been approved by the appropriate decision maker. The United States will comply with all of its international treaty obligations, including those imposed by the ABM Treaty while it remains in force.

AIRBORNE LASER

42. Senator LANDRIEU. General Kadish, most missile defense experts, while possessing varying degrees of confidence in the Airborne Laser system's viability, agree that the concept of Boost-Phase Intercept holds great promise from a political and technical standpoint. Can you please update us on the status of the Airborne Laser program and where it is going?

General KADISH. The concept of boost-phase intercept does hold great promise. In a layered approach to ballistic missile defense, the capability to destroy ballistic missiles early in their flight profile will be a very important capability. The Airborne Laser (ABL) program has made a lot of progress over the last calendar year. Some examples include "first light" from laser module # 1, which achieved a power output of 111 percent of design specification. Major structural modifications to the 747-400F aircraft were completed in Wichita, Kansas, including attaching the 14,000 pound turret to the aircraft. This culminates the largest structural modification ever undertaken to a commercial aircraft. The integration and test checkout facility for the beam control/fire control system was opened in Sunnyvale CA; and developing the software and hardware that will comprise the BMC⁴I system will continue. Next year's activities will include flight testing of the airframe with the turret installed, laser integration in the system integration laboratory at Edwards AFB, and continuing to populate the beam control/fire control integration and test checkout facility

with hardware. It is expected that ABL will allow the United States to counter missiles of all ranges in the boost and ascent phase.

SYSTEM DEPLOYMENT

43. Senator LANDRIEU. General Kadish, the proposed fiscal year 2002 budget includes provisions to expand the range complex by building facilities, to include missile silos used to store test interceptors, at a site in Alaska which has been proposed as the location for the NMD system when ultimately deployed. We've also been told that storing these test vehicles in silos would provide the United States with an "emergency capability" even before system deployment. Is this true? If so, does it violate the ABM Treaty?

General KADISH. The program includes plans to construct test silos at Fort Greely, Alaska that will contain test interceptors to support testing activities. Should the United States face an emerging threat, it will have the option to take steps necessary to give the test site some operational capability on an emergency basis to provide a very limited defense capability. The process of reviewing the ABM Treaty compliance of these activities has not been completed. The United States will not take any action that will violate the ABM Treaty while it remains in force.

QUESTIONS SUBMITTED BY SENATOR JACK REED

AIRBORNE LASER

44. Senator REED. Secretary Wolfowitz, at the hearings we held, you stated twice that the Airborne Laser program is a clear violation of the ABM Treaty. My understanding is that unless the Airborne Laser system is tested against a strategic ballistic missile target, it would not constitute a violation of the ABM Treaty since it is a theater ballistic missile defense system. I gather that the Compliance Review Group at DOD has reviewed the program previously, but had not conducted a final compliance review because the technology was not mature enough to render a compliance determination.

Has the Department changed its position on whether the Airborne Laser system would comply with the ABM Treaty, and has it reached a final determination on compliance of the ABL system? Is it the Department's determination that the ABL system would violate the ABM Treaty even if not tested against a strategic missile target?

General KADISH. The Air Force has briefed the ABL program to the DOD Compliance Review Group (CRG) on a regular basis. While no final determination of treaty compliance for ABL has yet been made by the CRG, nor have they determined at what point the ABL program might bump up against the ABM Treaty, they have determined that no formal compliance certification under DOD Directive 2060.1 has yet been required.

45. Senator REED. General Kadish, the Program Manager for the ABL program recently briefed committee staff on the program and said that the program remains a TMD program designed and intended to defeat theater ballistic missiles. Has the Department changed the program's objectives recently away from a TMD mission?

General KADISH. Yes, the Department has broadened the objectives for the ABL Program to address longer range missiles. We have not, yet, changed the performance specifications of the baseline ABL program. Rather we are investigating its capability against other BMD threats in addition to theater ballistic missiles to determine if changes should be made to the baseline program.

46. Senator REED. Secretary Wolfowitz, is the current lethal shoot down test currently planned for fiscal year 2003 going to be against a theater missile target or a long-range missile target?

Secretary WOLFOWITZ. The current ABL baseline program plan is to test against a theater missile target at the end of calendar year 2003. The baseline test plan is being reviewed for possible inclusion of other BMD threats.

PROGRAM MANAGEMENT

47. Senator REED. General Kadish, at the hearing, we discussed the Space-Based Kinetic initiative proposed in the fiscal year 2002 budget request. At the hearing you indicated that the program is funded at roughly \$4 million for fiscal year 2002. A recent newspaper article suggested it may be a much higher figure. Please pro-

vide for the record the amount of funding proposed for fiscal year 2002, and a description of what the funding is intended to accomplish during fiscal year 2002. Is there a plan to deploy such a system, and if so what is the estimated cost and deployment date? What would be the system's intended capability?

General KADISH. Within the Fiscal Year 2002 Amended President's budget request is \$20 million for space-based, kinetic energy boost phase intercept (BPI) activities: \$15 million to support space-based BPI concept definition and operations concepts, and \$5 million for the design and hardware requirement definition for a space-based kinetic energy experiment. These efforts are specifically aimed at advancing the state of the art for space-based BPI applications. Alternative platforms for space-based interceptors will be conceptualized and evaluated during concept definition to determine system and platform trade-space. In parallel, this element will be supported by modeling and simulation. Experimentation and phenomenology data collection activities conducted within the segment integration line of this program element (PE 0603883C) will provide validation for the models and simulations used.

There are no plans at present to deploy such a system. The specific ballistic missile defense architecture and deployment timelines are as yet undefined, but will take shape over the next few years. As new ideas (such as a space-based kinetic energy BPI concept) mature, they will be integrated into the BMD System if they increase the capability to respond to the evolving threat, and if they are effective within the overall system, technical risk, potential deployment schedule, and cost.

SPACE-BASED KINETIC INTERCEPTOR

48. Senator REED. General Kadish, at the hearing I asked if you would think it beneficial for Russia to have a space-based kinetic interceptor program capable of shooting down U.S. long-range missiles. Your answer indicated that you thought it could be useful if Russia had a space-based kinetic interceptor capability to defeat an accidentally launched U.S. missile. I would like to know what your view would be if Russia had the capability to intercept all U.S. long-range ballistic missiles, rather than just an accidentally launched missile. Do you think such a capability would be good for our security, or would that cause you concern that our deterrent capability is reduced?

General KADISH. Senator, you've asked me to comment on a hypothetical question that does not fall within my purview. As the Department of Defense official in charge of being the materiel developer for our missile defense program, it is not for me to comment on the strategic implications of various hypothetical Russian missile defense deployments.

DEVIATION FROM STANDARD ACQUISITION PROCESS

49. Senator REED. General Kadish, in your prepared statement you stated that: "We must deviate from the standard acquisition process and recognize the unprecedented technological challenges we are facing. We do not have major defense acquisition programs in the fiscal year 2002 budget. We do not have program activities with traditional fixed milestones and clearly marked phases showing the road to production." But it is just these "traditional acquisition processes and clearly marked phases" that have made the U.S. military the best in the world, bar none. If the F-22 fighter were being developed without these traditional processes, there would be no way to determine what stage it was in its testing, when it would be deployed, and how much it would cost, or even what it was being designed to do. Without these traditional processes how do you expect oversight organizations both within and outside the Pentagon, including Congress, to do their jobs in the missile defense area?

General KADISH. The Fiscal Year 2002 Amended Budget Submission has been delivered to Congress with additional program details. BMDO will monitor the development of our systems through disciplined, internal engineering and program management processes. The only change we are proposing is how the Department oversees our progress. In lieu of the formal Milestone review, which occurs at intervals often spanning several years, the Department is planning to review BMD at a senior level in a formal process on an annual basis. These incremental steps allow technologies that are proven successful to continue to mature or be accelerated and those that do not prove successful to be slowed or terminated.

At an oversight level, a senior executive council, chaired by the Deputy Secretary of Defense, will provide BMDO guidance and direction. The top-down oversight will enable BMDO to carry out our new approach with shorter lines of communication

and authority. BMDO will have the flexibility to adjust program priorities and will support major annual reviews with the oversight council to refresh policy and strategic framework for program direction. During these annual reviews, the oversight council will make executive level decisions to deploy, accelerate, truncate or modify capabilities or elements of the Ballistic Missile Defense System, major programming decisions, and execution year adjustments. The review process will help make decisions to shape the evolving systems and allocate resources to optimally support missile defense. Congress will have insight into detailed spending plans through the budget submissions provided by the Department.

50. Senator REED. General Kadish, how will we know the taxpayers are getting their money's worth for missile defense, or that the programs you are pursuing will work effectively?

General KADISH. Let me start with the second question. The programs we have pursued for a number of years now are bearing fruit. The PAC-3, for example, designed to intercept short-range missiles like the Scud, will be fielded this fall. It will work. Other important systems are maturing—the technology is at hand, and we're working hard on engineering and reliability. Any future deployments made from the programs we are pursuing will be done with an initial early capability and grown to be more and more effective over time in a layered system of defenses.

Will it be worth the money? That must be measured by the cost of not having a defense, by the cost of devastation of an American city or two. We have national defenses against terrorism, but nothing against missiles targeted at American soil. We have air defenses for our deployed troops, but woefully little to protect them from ballistic missiles, such as the one that killed 28 and wounded another 99 service members 10 years ago.

As major defense programs go, the expenditures are in line with, or less than, programs of comparable impact. The entire BMD budget request this year is about 2½ percent of the DOD request and fills a gap where no previous effective capability existed against missiles. In so doing, it will strengthen both deterrence and defense as one important part of our national security fabric.

CAPABILITIES-BASED DEVELOPMENT

51. Senator REED. General Kadish, you stated last week in your prepared statement that you "intend to go beyond the conventional build-to-requirements acquisition process . . . [and have] adopted a capability-based approach."

Requirements serve an important role in the defense business. They define, among other things, how much time and money to spend on a program. Development programs come to a successful conclusion once their performance requirements are met and the required number of units are bought. With no requirements, how do you know you are spending the correct amount?

General KADISH. Given the considerable technical challenges of our mission, a traditional acquisition process that includes rigid, predetermined user requirements does not provide the requisite flexibility to build missile defenses efficiently. For this reason, capability-based acquisition is appropriate for this program.

Nevertheless, while it is correct that we intend to go beyond the conventional build-to-requirements acquisition process, BMDO will conduct a structured acquisition process. In fact, we do have requirements in the form of system development objectives and goals, which can and will be adjusted based upon the results of research, experimentation, and testing. These standards differ from the conventional process in that they will evolve in parallel with capabilities, allowing us to significantly reduce schedule and cost risk.

We successfully followed this approach in our early ICBM programs, when progress was paced by the evolution of our technological and engineering maturity. As needed and possible, those capabilities were enhanced. In accordance with our Block acquisition approach, BMDO and the Department will conduct rigorous annual reviews of all program activities to ensure that we proceed steadily towards an architecture that will maximize defensive capabilities. At these recurrent decision points, systems will be evaluated on the basis of technological maturity, mission requirements, technology readiness levels, cost, resource availability, and schedule. Throughout, the CINCs and Service Users will be involved in the development process so that, with each block, we move steadily forward towards a system with ever-increasing military utility that incorporates complementary operational capabilities and minimizes life cycle cost.

52. Senator REED. General Kadish, it sounds like your proposed approach is something like "we'll see what we can build and then say that level of capability is our requirement." If so, doesn't that turn the normal definition of a "requirement" on its head? How can you judge whether your programs are successful or not if there is no standard for measuring success?

General KADISH. While it is correct that we intend to go beyond the conventional build-to-requirements acquisition process, BMDO will conduct a structured acquisition process. In fact, we do have requirements in the form of system development objectives and goals that can and will be adjusted based upon the results of research, experimentation, and testing. These standards differ from the conventional process in that they will evolve in parallel with capabilities, allowing us to significantly reduce schedule and cost risk.

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BALLISTIC MISSILE DEFENSE PROGRAM

53. Senator REED. General Kadish, So far, the proposal for missile defense has been described only in general terms. Given the far-reaching nature of the proposed restructuring of the missile defense program, one would expect you have a detailed implementation plan to achieve the program's objectives, including schedule, milestones, technical objectives, test program and cost estimate. We need this implementation plan to do our work in marking up the fiscal year 2002 budget request. When will you deliver this plan to the committee?

General KADISH. The fiscal year 2002 amended budget submission has been submitted to Congress that provides detailed program plans for the full fiscal year 2002 program.

54. Senator REED. General Kadish, at a press conference on June 13 you said that you have "internal plans that [you] are going to work to."

When will you submit those internal plans to the committee?

General KADISH. The fiscal year 2002 amended budget submission has been submitted to Congress that provides detailed program plans for the full fiscal year 2002 program.

UNCERTAINTY IN PROGRAM

55. Senator REED. General Kadish, in your prepared statement for the first BMDO hearing you stated: "I cannot tell you today exactly what the [ballistic missile defense] system will look like even 5 years from now."

We have been researching missile defense technologies for decades, and have spent tens of billions of dollars on them, but this comment seems to be suggesting that we have to start again as if we have not learned from all that effort.

For what time frame can you tell us what the system will look like?

General KADISH. Our evolutionary approach focuses on developing a single integrated BMD System that will change over time, depending on the threat, operational need, and technological maturity. We have learned a great deal from past efforts and will continue to build on our technical progress. However, by not committing to a single architecture, as we have in the past, we can explore multiple development paths and take advantage of the best technological approaches and most advantageous basing modes. This approach also provides the opportunity to deliver capabilities incrementally, in increasingly enhanced blocks, rather than wait for the ultimate architecture. We have organized the program with the aim of delivering militarily useful capabilities in biennial blocks, starting as early as the 2004-2006 time frame. Therefore, the composition and capability of the BMD System will evolve based upon selection of proven technology, demonstrated successes, and opportunities and need for incremental employment, and, of course, affordability.

While we cannot tell you what the final composition of the BMD System will look like, system choices and timelines will take shape over the next few years, and the evolution of the system will be defined through our capability-based, block approach.

56. Senator REED. General Kadish, if you have no clear idea of where you are heading over 5 years, how can you be sure that you are funding the correct activities?

General KADISH. Our fundamental objective is to develop the capability to defend the forces and territories of the United States, its Allies, and friends against all classes of ballistic missile threats. What we do not know, at this point, the most promising developmental paths. Our evolutionary strategy is to fund a broad range of activities and parallel development paths to improve the likelihood of achieving an effective, layered missile defense. To ensure that we are funding the right activities, we are putting in place a stringent engineering approach to aggressively develop and evaluate technologies and concepts and a new rigorous test program incorporating a larger number of tests and employing more realistic scenarios and countermeasures. This robust engineering and test activity will provide the technical basis for decisions to accelerate, continue, truncate, or terminate activities.

57. Senator REED. General Kadish, what would be the basis of any future decisions to adjust funding between different programs?

General KADISH. Decisions will be based on thorough analysis of risks, technical progress, performance, and affordability.

PENTAGON REVIEW

58. Senator REED. General Kadish, has the fiscal year 2002 proposal for ballistic missile defense been looked at by the military services as part of the Quadrennial Defense Review?

General KADISH. The Department initiated several major reviews of strategy and forces at the outset of the administration. The ongoing Quadrennial Defense Review reflects the decisions made as a result of these initial assessments. Among these was a missile defense review, which has been completed, and the results have been briefed to Congress. Missile defense is one of the top priorities for the administration, and it was important to implement the results of the review as soon as possible. The Services played a role in the budget review process for missile defense.

59. Senator REED. General Kadish, given the focus the proposal has on testing, has it been reviewed by the Director, Operational Test and Evaluation organization?

General KADISH. The Department budget process combines numerous budget proposals into the overall budget for the fiscal year in concert with Departmental guidance. These budget proposals are provided to the Comptroller for consolidation into the Departmental budget. The Director, Operational Test and Evaluation organization reviews the justification materials that accompany the budget submission.

60. Senator REED. General Kadish, if not, why? When will DOT&E review the testing plan?

General KADISH. DOT&E is provided an opportunity to review and comment on all major revisions to MDA test programs. They also approve all operational test planning as documented in the Test and Evaluation Master Plans (TEMPs).

CONSOLIDATION OF FUNDING LINES

61. Senator REED. General Kadish, you propose to establish six major pots with \$7 billion of research and development money and to do annual reviews each November to determine what technologies are proving successful. The idea, as I understand it, is that you could accelerate, truncate, deploy or slow down specific programs after each review. Are you proposing to be able to transfer funds within these pots without requiring a specific authorization from Congress, or at a minimum a reprogramming request?

General KADISH. The question focuses on the proposed November department review process of the BMD program. Our idea is that BMDO will make annual recommendations to the OSD senior leadership on program plans and budgets in November in order to finalize the President's Budget position submitted to Congress in the following 2 months. BMDO and the Department, just like every year, will propose an allocation of funds to support our priorities, which may include program acceleration, truncation, or deployment. Once funds are appropriated, BMDO will

have the ability to reallocate funds across projects within a Program Element, consistent with the Department's current operating procedures. Current procedures also limit transfers to only \$3.999 million between Program Elements for RDT&E; for transfers greater than this, we would coordinate with OSD and Congress, as necessary.

AIRBORNE LASER

62. Senator REED. General Kadish, the Airborne Laser has great potential as a boost phase intercept program, but it is technically challenging, as most revolutionary concepts are. The proposed \$196 million plus-up in fiscal year 2002 almost doubles the ABL funding level. What is the new funding to be used for? Will any of this funding be used for EMD? What changes in program schedule would result if this additional funding is or is not made available?

General KADISH. Fiscal year 2002 funds continue execution of the Airborne Laser Preliminary Design and Risk Reduction Program. This includes completing fabrication, integration, and testing of the key ABL segments: battle management, beam control fire control, and laser. It also provides for preparation of facilities and support equipment at Edwards AFB, CA. The Fiscal Year 2002 ABL budget reflects funding for increased (1) spares, (2) contractor test manning, (3) test assets, and (4) government test support in order to correct program shortfalls and to reduce technical and schedule risk during ABL integration and testing.

In regards to funding used for EMD, the budget includes \$10 million to initiate purchase of long lead optics for the first full-power ABL aircraft. The \$10 million is needed to meet congressional direction in the fiscal year 2001 authorization act to maintain the ability to meet a fiscal year 2008 IOC. In addition, the program will conduct risk reduction efforts on technologies for application in the full power ABL. None of the fiscal year 2002 funds will be used for EMD design efforts or purchase of an aircraft.

Without full funding in fiscal year 2002, the ABL PDRR program execution will increase in schedule and technical risk. The program will be forced to reduce spares, test assets, and test manning. Given such circumstances, the test schedule will likely face delays.

63. Senator REED. General Kadish, can the new funding be spent efficiently in 1 year without increasing program risk? Why or why not?

General KADISH. Yes, the program can efficiently spend the requested funding. Fiscal year 2002 funding of \$410 million is comparable to the fiscal year 2001 funding of \$386 million, including the Fiscal Year 2001 Emergency Supplemental. The new funds allow us to buy spares off the current ABL fabrication lines. Additional manning for the test team will come from the existing design teams. The lean funding for the ABL program in the fiscal year 2001 President's budget would have forced us to shut down ABL fabrication lines and reassign ABL design teams. The fiscal year 2002 President's budget bridges this funding gap.

64. Senator REED. General Kadish, since the ABL laser must fit into a 747 aircraft, the size and weight of the laser system are critical, and must be kept below a certain limit. How does the current estimated weight of the test system compare to the operational system weight limit?

General KADISH. The prototype weapons system engineered in the Preliminary Design and Risk Reduction phase of development is currently projected to weigh 174,194 pounds. The current target weight the program office has set is 180,000 pounds for the operational system at design completion.

65. Senator REED. General Kadish, if the laser system exceeds the weight limit, will you reduce the number of laser modules to compensate? Would the system be effective with less laser power?

General KADISH. For the operational system, the design will be optimized to provide the warfighter with optimum system performance and effectiveness. The ABL program maintains a database of weight reduction and aircraft-performance enhancement concepts that will be explored during the EMD design. Reducing the number of laser modules would not be the first consideration.

66. Senator REED. General Kadish, how are you addressing potential countermeasures to the Airborne Laser? What are the most important potential countermeasures that the department has examined thus far, and by what numerical amount would these countermeasures reduce ABL performance, if deployed?

General KADISH. The AF has established a Directed Energy Countermeasures Assessment Team managed and operated separately from the ABL Program office, which is exploring all possible countermeasures identified within the Defense community. The details regarding their efforts are classified. BMDO is also funding a significant counter-countermeasures effort to comprehensively explore realistic countermeasures, across all phases of a missile trajectory, that could be employed by adversaries attempting to defeat the BMD System.

67. Senator REED. General Kadish, the Airborne Laser is designed to rupture the fuel and/or oxidizer chambers of a ballistic missile, thereby causing early termination of the missile's boost phase. What test activities has the department conducted, or does the department have planned, to determine whether or not the warhead carried by a missile will still detonate after an ABL engagement?

General KADISH. The Preliminary Design and Risk Reduction test program focuses on demonstrating the concept of tracking and destroying a ballistic missile in the boost phase. The weapon system's primary objective is to prevent a missile warhead from hitting its designated target. There are other modeling and simulation efforts underway within the BMDO Test directorate to examine boost phase lethality and debris and warhead shortfall stemming from missile defense engagements. ABL is participating in those efforts.

SBIRS-LOW SATELLITE SYSTEM

68. Senator REED. General Kadish, SBIRS-Low is a satellite program being developed primarily to contribute to the National Missile Defense Program. Your proposed fiscal year 2002 budget would transfer SBIRS-Low from the Air Force to the Ballistic Missile Defense Organization. General Kadish, in your testimony last week, you stated that SBIRS-Low will "enhance detection . . . and provide critical mid-course tracking and discrimination data for ballistic missile defense." You have indicated that current life cycle cost estimates for SBIRS-Low currently range as high as \$20 billion or so. I understand there is a study on SBIRS-Low going on now, led by BMDO. What is the purpose of the study, and what results seem to be emerging? Do you plan on providing the results of this study to Congress?

General KADISH. The purpose of the study is to comply with the Deputy Secretary of Defense direction from Program Decision Memorandum (PDM-1), dated 22 Aug 2000. PDM-1 directs BMDO to ". . . provide to the Deputy Secretary of Defense . . . a comprehensive study of cost-effectiveness issues concerning the contributions of SBIRS Low to defense missions, with the primary emphasis on NMD." The objective of the study is to estimate the military utility and total cost of SBIRS Low as a basis for future Department decisions and determine the cost-effectiveness of selected alternatives to SBIRS Low.

New analysis conducted in fiscal year 2001 for the SBIRS Low PDM study involved assessing the military utility of SBIRS Low and/or terrestrial radar alternatives in support of national missile defense. With the directed focus on NMD the study relies on summarizing past analyses to show the military utility of SBIRS Low to the former Theater Missile Defense mission area and Missile Warning, Battle Space Characterization and Technical Intelligence mission areas. Since the inception of the SBIRS Low PDM Study, the Secretary of Defense directed BMDO to develop a research, development and test program that focuses on missile defense as a single integrated Ballistic Missile Defense System, no longer differentiating between NMD and TMD. The new analysis performed for the study analyzes military utility with respect to what is now known as the Ground-based Midcourse element of the BMD System.

The preliminary results emerging from the SBIRS Low PDM Study support the need for SBIRS Low capability within the legacy NMD architecture and are consistent with the many studies performed by BMDO over the last decade. Results show that SBIRS Low will provide critical precision cueing and midcourse tracking and prevent threat complexes from overwhelming system radars with countermeasures. In addition to providing the BMD System a robust solution against complex threats, it provides significant added value to the ancillary missions: Missile Warning, Battlespace Characterization, and Technical Intelligence.

The study will be provided to the Deputy Secretary upon conclusion and will be made available to Congress with his approval.

69. Senator REED. General Kadish, why do you propose to accelerate SBIRS Low now, before the study is completed and the results are reviewed?

General KADISH. The emerging SBIRS Low PDM study results are consistent with the many studies performed by BMDO over the last decade-SBIRS Low satellites are essential for supporting a robust missile defense capability against the evolving threat. It is necessary to accelerate the program now, because sophisticated threat countermeasures are expected to be such that, by the time SBIRS Low constellation is fielded, performance of a radar-only defense will be below that needed to counter the threat. The proposed schedule for SBIRS Low development is capable of addressing over time an evolving advanced threat. SBIRS Low will provide multiple engagement opportunities and complicate the adversary's plans with a layered surveillance capability. SBIRS Low is also expected to be capable of handling a larger number of reentry vehicles, penetration aids, and associated objects that could otherwise overwhelm existing radar sensors.

The program plan focuses on accelerating the early risk reduction activities to preserve an option to speed up the deployment of the satellite constellation. The program will be reviewed annually to assess program needs and progress. Review of options to accelerate SBIRS Low deployment will take place annually.

70. Senator REED. General Kadish, would the proposed acceleration of SBIRS Low allow for adequate testing of the basic satellite performance prior to committing to buy a large number of satellites?

General KADISH. Based on our revised acquisition strategy and associated risk reduction activities, the proposed acceleration of SBIRS Low allows for adequate testing of satellite performance prior to committing to purchase a large number of satellites. It also allows for evolutionary block upgrades as necessary and feasible. These risk reduction activities will allow the SBIRS Low program to address design issues earlier, allow more design schedule recovery time, provide for higher confidence in source selection, and achieve the proposed development schedule. A description of risk reduction activities follows:

The SBIRS Low Program has developed a robust Ground Demonstration Program (GDP), in which contractors use simulations and hardware-in-the-loop testing to reduce risk during the design process and on-orbit test period. The GDP has supported engineering trades at the beginning of the Program Definition and Risk Reduction Phase and will continue to provide lessons learned during the satellite design process. When the initial satellites are launched, they will be electronically networked with simulated satellites in the GDP to further enhance the fidelity of test results prior to additional launches.

The SBIRS Low Program added an Engineering Model Sensor Package with the acceleration of the program. The Engineering Model Sensor Package will allow contractors to test an integrated SBIRS Low sensor prior to development of the satellite qualification unit and the final operational satellite design.

The Ballistic Missile Defense Organization will review the SBIRS Low Risk Reduction program results at the annual BMD System review, while facilitating the build-up for production of the SBIRS Low constellation. The robust risk reduction program aims to demonstrate what does and does not work within the hardware and software designs. The annual BMD high-level decision review will steer the program in the most promising direction based on data generated by risk reduction activities and contractor progress.

71. Senator REED. General Kadish, how much funding would be committed to satellite purchases prior to the first operational test results?

General KADISH. The fiscal year 2002 APB includes \$46.881 million to start the satellite buys for testing purposes. The Department has not addressed fiscal year 2003-2007 requirements.

NAVY AREA DEFENSE SYSTEM

72. Senator REED. General Kadish, just last year, about \$120 million had to be added to the Navy Area Defense System across the next 2 years to cover program cost growth during the research and development phase. Despite this, the First Unit Equipped date for the program has slipped from fiscal year 2003 to fiscal year 2004.

Just last week, the Secretary of the Navy sent a letter to Congress stating that the average procurement unit cost for the Navy Area program was expected to exceed the planned value by more than 25 percent. Recent news reports suggest an additional program delay. The proposed budget adds a further \$98 million to the Navy Area program to fix R&D problems, and I understand from the Secretary of the Navy's letter that significantly more will be needed in the outyears to cover pro-

gram cost growth. How much cost growth do you expect in the program over the next 6 years—the time frame of the Future Years Defense Program?

General KADISH. The Secretary of the Navy notified congressional members on July 13, 2001 that unit costs for the Navy Area TBMD Program have exceeded the Acquisition Program Baseline values by more than 25 percent. The exact amount is still pending given uncertainties related to the DOD Strategy Review and fiscal year 2003 budget development process.

73. Senator REED. General Kadish, what are the reasons for the significant cost growth in both procurement, and research and development costs?

General KADISH. Research and development cost growth has been driven by technical integration issues associated with the SM-2 BLK IVA missile's increased cost for target procurements and restructuring of test and evaluation events. SM-2 Block IVA technical issues in the area of software integration and hardware/software integration within the guidance section have required adjustments to the program schedule. Schedule adjustments impact other parts of the program, including key missile/ship integration activities, test ship certification, and extension of the Developmental Testing/Operational Testing (DT/OT) test program, all of which add additional cost.

Increased target costs are attributable to contract overruns for DT/OT testing at the White Sands Missile Range (WSMR), in addition to increased estimates for at-sea Short-Range Air Launched Targets. The restructuring of Test and Evaluation execution phases at WSMR and for at-sea DT/OT has resulted in increased costs for test execution and range charges.

Procurement cost growth has been driven by a number of factors. These factors include: higher unit cost estimates due to a flatter learning curve based on Long Lead Material/Low Rate Initial Production proposal; changes in assumptions for Value Engineering Change Proposal (VECP) phase-in/costs; and higher estimates for spares, canisters, and production support. Decreases in near-term production due to higher missile costs and budgetary constraints have affected vendor stability and increased risk to the industrial base. Additionally, common component costs have increased based on fiscal year 2001 contract awards.

74. Senator REED. General Kadish, given the excellent prospects for the PAC-3 program, and the high interest our allies have in purchasing PAC-3 batteries, what is the relative military contribution of the Navy Area program to our theater ballistic missile defense posture?

General KADISH. The Navy Area and PAC-3 provide two different but complementary and essential capabilities for defense against short-to-medium range ballistic missiles. Conclusions of the Navy Area Theater Ballistic Missile Defense (TBMD)/Patriot PAC-3 Report to Congress of 24 May 2001 were that the PAC-3 interceptor does not meet Navy Area performance requirements.

If PAC-3 is not pre-deployed, the Navy Area-equipped ship could protect an asset such as a port or coastal airfields from ballistic missile threats and Anti-Air Warfare (AAW) threats while U.S. forces, including other missile defense assets, are arriving in theater. Navy Area could also be used alone to provide littoral defense as well as fleet protection. Navy Area assets would provide great flexibility and quick response to regions that do not have forward-deployed ground-based missile defense systems. In addition, the Navy Area Block IVA missile maintains AAW requirements of the SM2 Block IV against advanced anti-ship cruise missile threats.

The PAC-3, when forward deployed, can be used alone to provide point defense of collocated assets. But when used together, both the PAC-3 and the Navy Area can provide a defense in depth that neither could provide alone. These complementary capabilities could appeal to other nations for the same reason. The Navy Area capability might be particularly attractive to those nations already possessing an Aegis capability.

NAVY THEATER WIDE VS. ICBMS?

75. Senator REED. General Kadish, currently, the Navy Theater-Wide program is being designed to defend against theater ballistic missiles, rather than ICBMs. Do you plan on testing the Navy Theater-Wide system against ICBMs? If so, when?

General KADISH. The Navy Theater Wide (NTW) program is being integrated into the Mid-Course Segment of the Ballistic Missile Defense System as the Sea Based Mid-Course (SBMC) element to defeat medium to long-range ballistic missiles in the midcourse ascent phase of the exo-atmospheric battlespace. A concept definition phase will be initiated in fiscal year 2002 to focus on a more robust SBMC system

with a desired deployment in the fiscal year 2008–2010 time frame. Given the early stages of the concept definition study, specific test objectives have not yet been defined.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. AKAKA

76. Senator AKAKA. Secretary Wolfowitz, I asked you about the international consequence of using an Airborne Laser, specifically of disabling a missile booster with a nuclear warhead which would then lead it to fall someplace, other than the United States, and potentially land on an ally or neutral party. You stated that we do not have the capability, at this time, for the airborne or space laser, and that you would rather work on that before worrying about consequences of that capability. A boost phase intercept has very little time to intercept a fast moving target. By the time we detect and launch an interceptor against a missile launched by, for example, North Korea or Iraq that missile will likely be over another country's territory. There is nothing to prevent an adversary from arming its warhead at launch rather than in the descent phase so we must be prepared for the consequences of knocking down a missile with an armed warhead.

If the U.S. policy is to convince our allies and the international community that the layered BMD approach will serve all our interests, how can that be reconciled with the very real consequence of dropping warheads on them after they are deflected from their original trajectory?

Secretary WOLFOWITZ. The Airborne Laser is part of our proposed system of layered missile defense. The benefit of a layered missile defense is that it increases the probability of hitting the target missile and its warhead, as there are multiple opportunities for engagement. An increased probability of hitting the target missile and its warhead serves all our interests.

77. Senator AKAKA. Secretary Wolfowitz, there have been several comments about the U.S. NMD program not being a threat to Russia's thousands of nuclear warheads. While it is true that Russia has thousands of warheads, the real question is the number of missiles that Russia believes are reliable. How many do Russian planners consider effective on any given day? How many do they believe would survive the theoretical U.S. first strike? When all the missile silos, stored submarines, mobile units and warheads are subtracted from the total number, how many are left?

Secretary WOLFOWITZ. [Deleted.]

78. Senator AKAKA. Secretary Wolfowitz, you have stated that you do not believe that Russia would increase its missiles or MIRV warheads in response to a limited American capability. Do you have the same assessment for China? Is it our intelligence assessment that China will not increase its missiles or warheads if the U.S. deploys a limited capability?

Secretary WOLFOWITZ. [Deleted.]

79. Senator AKAKA. General Kadish, you have outlined a very aggressive test plan for the next few years. You stated that you plan on performing 12 tests over the course of the next 2 years. Do you have the personnel to prepare and carry out these tests, perform the analysis, and other research and development for which you are responsible?

General KADISH. Yes. We had expected the load on program and staff personnel, particularly test and engineering, to become much greater and have budgeted for, and already started, adding additional personnel to accommodate the extra load over this time period. I am comfortable that our organization can support this test plan.

80. Senator AKAKA. General Kadish, an alternative to mid-course missile defense is a re-entry, or terminal phase system. A terminal phase system waits until a warhead and countermeasures have re-entered the atmosphere and decoys will begin acting differently depending on the type of decoy being used. For example, balloon decoys may begin slowing down relative to the warhead at 250km, while a traffic cone may not until 50 or 60km. What requirements have you defined for the proposed re-entry system? At what altitude do you expect it to work? How large an area do you expect it to cover? How much time will it have to track and home in on the warhead?

General KADISH. You are correct that a characteristic of terminal defense systems is that they can take advantage of atmospheric slow-down (which begins at about

100 km altitude) of intentional and unintentional penetration aids to assist the discrimination process to identify the lethal warhead in the presence of decoys and debris. Each of our terminal defense systems has different requirements, depending on the specific threats they are engaging. The THAAD system, for example, is an area defense system that counters short-, medium-, and long-range theater ballistic missiles. Therefore, it operates in both the mid- to high-endo- and exo-atmosphere to defend a large area on the ground. This allows THAAD to time its engagement to take advantage of the very phenomenon you mentioned, but to also intercept at higher altitudes that would be more effective in the presence of other counter-measures. PAC-3, Navy Area, and MEADS, are limited area defense systems that defend critical assets from short- and medium-range ballistic missiles. Engagements by these systems occur in the low endo-atmospheric regime. Their effectiveness is also enhanced by atmospheric strip out. Speaking very broadly, Lower Tier systems such as PAC-3 could defend a city, while an Upper Tier system such as THAAD could defend a medium sized state. Tracking is a function of warning time provided by sensors not on the interceptor, with more obviously being better. Homing is done by the interceptor and is a function of optimum intercept altitude.

81. Senator AKAKA. General Kadish, you testified before the House Armed Services Committee on June 14, 2001, that advances in lightweight structures have enabled a lighter and smaller kill vehicle. This allows costs of the kill vehicle to be kept low while increasing lethality. However, such gains may be lost to a boost phase missile defense system that requires a kill vehicle to maneuver and accelerate to reach an ICBM after its launch. Such diverting capability will require considerable fuel, which will increase the kill vehicle weight and volume. How will a larger and more massive kill vehicle affect plans for a ship-based boost phase system for ICBM threats?

General KADISH. There are many factors that affect the size and mass of the kill vehicle. For boost phase interceptors, the two most important factors are: (1) the ability to predict where the hostile booster is going; and (2) the need to be able to accelerate the kill vehicle quickly from side-to-side if the target maneuvers.

The first factor requires that we have a lot of fuel on board the KV to take out any errors we might have in predicting where the threat missile will be when we intercept it. This may require having more than half again as much fuel for the divert and attitude control system as we need for coasting targets.

Studies have shown that to counter a maneuvering boosting capability, we may require twice the acceleration that we currently need in our mid-course kill vehicles for coasting targets.

Intercepting during the boost phase does have its advantages as well. Since the burning missile is much brighter than a reentry vehicle coasting in space, we will need far less sensitive missile seekers to find it during boost.

Our investments in kill vehicle technology since 1986 have been focused on developing and testing lightweight, high performance seekers, high strength, light weight composite structures, and high performance divert and attitude control systems. These advances have enabled an order of magnitude weight reduction in the kill vehicles since the early 1980s. We will draw on this extensive technology base to help us solve this engineering problem.

Our plans for risk reduction in the boost phase include extending the kill vehicle technology base in flexible, high performance divert systems and integrated passive and active seeker systems. We believe this will provide the necessary engineering capability to make boost phase kinetic energy intercepts a reality.

QUESTIONS SUBMITTED BY SENATOR WAYNE ALLARD

COMPLIANCE REVIEW GROUP

82. Senator ALLARD. Secretary Wolfowitz, according to testimony from the Chairman of the Compliance Review Group before the Governmental Affairs Committee, "the Military Services and Defense Agencies must seek compliance approval before taking any action that would reasonably raise a compliance issue." So, by definition, activities that are evaluated by the Compliance Review Group have some sort of substantive compliance question at stake. Do you agree?

Secretary WOLFOWITZ. I agree.

COMPLIANCE REVIEW, TESTS AND CONGRESS

83. Senator ALLARD. General Kadish, THAAD is a particularly interesting example, because it is one in which a compliance determination was made ahead of time, at the insistence of Congress, although there was no attempt to withhold funding pending the outcome of the review, as some seem to be suggesting now.

The Fiscal Year 1994 Defense Authorization Bill required the administration to report to Congress on whether THAAD was compliant with the ABM Treaty because of its potential to have capabilities to counter strategic ballistic missiles. That report was sent to Congress on January 14, 1994, and concluded that THAAD, as its design was then understood, in fact would *not* comply with the ABM Treaty, and, according to testimony from General O'Neill, then Director of BMDO, "would have to be treated as an ABM system," and of course an illegal one since it is a mobile system. Later that year, the Senate passed a Defense Authorization bill that funded THAAD. In January of 1995, THAAD was cleared for initial flight testing, but on the condition that its ability to accept cueing data from space-based sensors be crippled. Finally, in September of 1996, the Clinton administration declared that THAAD was fully compliant, even with cueing software, because as more became known about the system, it became clear that the initial determination was wrong, and THAAD really didn't have ABM capabilities after all.

Thus—In the fall of 1993, the Senate funded a system whose compliance with the ABM Treaty was at the time questionable.

In the fall of 1994, the Senate funded a system which had been determined not to be compliant with the ABM Treaty, and continued that funding in subsequent years, until finally the system was declared compliant.

I also point out that last year's authorization bill authorized \$85.1 million for National Missile Defense Initial Deployment Facilities—which some of the expenditures are for the construction of an X-band radar at Shemya, Alaska, which is an activity which will clearly come into conflict or bump-up against the ABM Treaty.

So, would I be wrong in concluding that far from being some extraordinary departure from normal practice, uncertainty about the compliance of these testing activities is the way we have always done business, and necessarily so, given the nature of a test program?

General KADISH. That is correct. The compliance approval for any particular activity cannot be completed until all relevant plans are complete. On several occasions, that has meant that the compliance approval was completed weeks, or even days, prior to the activity.

OTHER THREATS

84. Senator ALLARD. General Kadish, some have argued that missile defense does not defend against other means of delivering a WMD payload to the U.S., such as a terrorist using a suitcase or car bomb. However, I know we are spending billions of dollars to combat terrorism which I do not believe will protect us from a ballistic missile attack. Thus, does this mean we shouldn't do either.

Can you please comment on this as well as discuss not only the Department's efforts, but also the Government's efforts as a whole to combat against this form of attack against the United States?

General KADISH. The United States must be prepared to defend itself against the full spectrum of threats—from conventional attack to terrorism. To combat terrorism, the DOD engages in intelligence collection and maintains force protection measures, the capability to preempt or otherwise counter terrorism, and units to assist with consequence management. DOD and other Federal agencies have undertaken a significant, integrated effort to develop effective policies on counterterrorism and establish mechanisms that enable the United States to preempt and deter terrorism against American citizens and U.S. interests around the world. Unfortunately, some terrorists succeed in accomplishing their objective. Even under those circumstances, the United States has aggressively pursued a policy that seeks to bring these terrorists to justice and has been successful in bringing a number to the United States for trial and convictions.

CHEMICAL AND BIOLOGICAL WEAPONS

85. Senator ALLARD. General Kadish, the U.S. has or is developing substantial defensive capabilities to deal with the threats posed by chemical and biological weapons and WMD terrorism. Do we have defensive capabilities that we have developed in response to the threat of chemical weapons?

General KADISH. We place a high priority on protecting our forces against chemical agents and have developed and continue to modernize our defenses against these weapons. The objective of our Chemical and Biological (CB) Defense Program is to enable our forces to survive, fight, and win in a chemically or biologically contaminated environment. Joint and Service-unique programs support the framework of CB defense: Contamination Avoidance (detection) and NBC Battle Management (reconnaissance and warning), Force Protection (individual, collective and medical support), and Decontamination. These capabilities combined with sound doctrine and realistic training are fundamental to our success.

Contamination avoidance capabilities are designed to detect, identify and confirm the presence of chemical hazards. Examples are chemical agent alarms, sensors, and NBC reconnaissance vehicles. Currently we are fielding the Joint Warning and Reporting Network that will enhance our NBC Battle Management capability by providing chemical hazard area predictions to the warfighting commander. Individual and collective protection capabilities allow forces to operate safely while in a chemical environment. These include the eye/respiratory protective masks, and battlefield protective suits. Collective protection capabilities include tentage and shelter systems as well as filtration systems on ships and vehicles. Decontamination capabilities allow the sustainment of operations in a contaminated environment. These capabilities include personnel decontamination kits, and combat equipment, vehicles, and aircraft decontamination systems and decontamination solutions. Additionally, integral to our chemical defensive capability are medical countermeasures designed to enable the individual warfighter to survive, fight and win in a chemical environment. These countermeasures include pre- and post-chemical exposure measures such as the nerve agent antidote and treatment procedures for chemical casualties. All of these capabilities integrated together are essential to avoid contamination, and to sustain operational tempo on an asymmetric battlefield.

86. Senator ALLARD. General Kadish, has there been a "chemical weapons arms race" in response the U.S. development of defenses to chemical weapons threats?

General KADISH. We view the proliferation of chemical and other weapons of mass destruction by nation states and transnational groups as a means to counter U.S. conventional superiority rather than as a response to enhanced U.S. defense against such weapons. Potential adversaries recognize their inability to fight and win a conventional war against the U.S. and therefore have pursued asymmetric methods such as chemical weapons to support their objectives. These weapons are also seen by nations as ways to complicate the U.S. regional presence, or influence U.S. decision making during a crisis. Other motivations for pursuing these weapons include enhanced prestige, intimidation or deterrence of regional adversaries, and the relatively low cost of these weapons. This strategy also applies to terrorist groups intent on inflicting a large number of casualties if they do not fear political or military retaliation.

87. Senator ALLARD. General Kadish, is the U.S. developing defensive capabilities in response to threats posed by biological weapons?

General KADISH. We place a high priority on protecting our forces against biological agents and have developed and continue to modernize our defenses against these weapons. The objective of our Chemical and Biological (CB) Defense Program is to enable our forces to survive, fight, and win in a chemically or biologically contaminated environment. Biological agents are different than chemical agents. It is difficult to detect a biological attack and the onset of symptoms may not occur until days after the attack. Therefore, biological defense is especially challenging and is receiving increased attention. Our Joint and Service-unique programs support the framework of CB defense: Contamination Avoidance (detection) and NBC Battle Management (reconnaissance and warning), Force Protection (individual, collective and medical support), and Decontamination. These capabilities combined with sound doctrine and realistic training are fundamental to our success.

Contamination avoidance capabilities are designed to detect, identify and confirm the presence of biological hazards. Examples are the U.S. Army's mobile Biological Integrated Detection System (BIDS) units and fixed site biological detection systems such as Portal Shield. Essential to the identification of biological agents is the laboratory confirmation of samples and this is provided by the U.S. Army's deployable Theater Medical Laboratory unit as well as other medical laboratories in the United States and overseas. The Joint Warning and Reporting Network will enhance our NBC Battle Management capability by providing biological hazard area predictions to the warfighting commander. Individual and collective protection capabilities allow forces to operate safely while in a biological environment. Examples of individual protection capabilities include the eye/respiratory protective masks. Collective pro-

tection capabilities include and shelter systems as well as filtration systems on ships and vehicles. Critical to the defense against biological agents are medical countermeasures. We have fielded and are developing more medical countermeasures that will improve individual protection, treatment, and diagnoses. These include vaccines that enable forces to be immunized against potential biological agents and antibiotics that may be used for treatment following a biological attack.

88. Senator ALLARD. General Kadish, has there been a “biological weapons arms race” in response to the U.S. development of defenses to biological weapons threats?

General KADISH. We view the proliferation of biological weapons and other weapons of mass destruction by nation states and transnational groups as a means to counter U.S. conventional superiority rather than as a response to enhanced U.S. defense against such weapons. Potential adversaries recognize their inability to fight and win a conventional war against the U.S. and therefore have pursued asymmetric methods such as biological weapons to support their objectives. These weapons are also seen by nations as ways to complicate the U.S. regional presence, or influence U.S. decision making during a crisis. Other motivations for pursuing these weapons include enhanced prestige, intimidation or deterrence of regional adversaries, and the relatively low cost of these weapons. This strategy also applies to terrorist groups intent on inflicting a large number of casualties if they do not fear political or military retaliation.

89. Senator ALLARD. General Kadish, do we have, and are we developing, capabilities to defend against WMD terrorism?

General KADISH. The WMD terrorist threat is one of the most difficult and pervasive challenges. To ensure a comprehensive approach to combating this threat to U.S. forces, DOD has organized a strong and aggressive antiterrorism/force protection program. The Department has persisted in making improvements, such as identifying and correcting antiterrorism vulnerabilities to ensure there is a reduction in risk to our personnel and property and implementing enhancements in planning, training, assessing, and equipping. Further, the Department is providing guidance and direction to assist the field commanders in developing and implementing antiterrorism programs.

90. Senator ALLARD. General Kadish, has there been an increase in terrorist efforts—a “terrorist arms race”—as a result of U.S. efforts to prevent and defend itself against terrorist threats?

General KADISH. [Deleted.]

ALLIES

91. Senator ALLARD. Secretary Wolfowitz, I have a hypothetical, what if an ally, Poland for example, comes to the United States to ask for our assistance in developing a missile defense system to combat a long-range ICBM threat. Can we share with them our ABM technologies to help them defend their territory against this long-range ICBM?

Secretary WOLFOWITZ. The ABM Treaty prohibits both transferring ABM systems or their components to other States and providing to other States technical descriptions or blueprints specially worked out for the construction of ABM systems and their components. All responses to requests to share ABM-related technologies with another State must be reviewed to assure that they are consistent with those obligations.

QUESTIONS SUBMITTED BY SENATOR JEFF SESSIONS

FISCAL YEAR 2002 BUDGET

92. Senator SESSIONS. General Kadish, Secretary Wolfowitz answered my question regarding what is the breakout of costs between theater and national missile defense in the fiscal year 2002 budget by stating, “About one to two billion for long range systems, one to two million for short range systems, and the rest for dual use technologies.” With greater fidelity, what is the Ballistic Missile Defense Organization’s (BMDO) budget for short range, long range and dual use technologies/programs for fiscal years 2001 and 2002? Also, similarly delineate the fiscal year 2001 supplemental request for BMDO.

General KADISH. The fiscal year 2001 supplemental request of \$153 million for Airborne Laser is to support the existing baseline Air Force program. The Depart-

ment-wide fiscal year 2002 amended budget requests \$8.3 billion total for missile defense. This information is based on the Fiscal Year 2002 Amended Budget Submission, which has been submitted to Congress.

In the previous construct of shorter-range missile defense and longer-range missile defense, the following budgets are requested. All funds are requested in BMDO's budget except where noted. Programs marked with an asterisk are split evenly between the two categories as their efforts apply to both.

[In millions of dollars]

	Short & Medium Range	Long Range
Patriot Advanced Capability-3	1 784	
Medium Extended Air Defense System	1 74	
Navy Area	2 395	
Ground Based Terminal (THAAD)	923	
Arrow	66	
Ground Based Midcourse		3,285
Sea-Based Midcourse (NTW)	596	60
Space-Based Kinetic Boost		105
Airborne Laser *	205	205
Space-Based Laser project *	85	85
SBIRS-L *	210	210
Advanced Technology *	56	57
International programs *	38	37
Systems Engineering *	410	411
Total	3,842	4,455

¹ In Army budget

² In Navy budget.

93. Senator SESSIONS. General Kadish, why did BMDO eliminate THAAD's Fiscal Year 2006–2007 procurement line and move funds from THAAD's EMD line in fiscal year 2002.

General KADISH. All THAAD funding has been designated as RDT&E to comply with the overarching BMD System acquisition approach. Funding levels for THAAD have been increased in fiscal year 2002 by \$210 million. In accordance with BMDO's restructured management process, it is BMDO's intent to transfer management of mature programs at the procurement stage to the Services. BMDO expects THAAD to be a mature program in fiscal year 2006–2007, at which time procurement responsibilities would be transferred to the U.S. Army. To facilitate the program transition to the U.S. Army, BMDO will allocate at the appropriate time "transition to procurement" funding to initiate low-rate production provided that development and testing prove successful.

PROGRAM MANAGEMENT

94. Senator SESSIONS. General Kadish, THAAD funds were lumped with other programs in a BMDO Dem/Val line. There is no indication of how much RDT&E belongs to THAAD. What are the details of the restructured funds?

General KADISH. The R-2 for the Terminal Defense Segment (PE0603881C) provided in the Fiscal Year 2002 Amended President's Budget Submission includes an R-2A exhibit for the THAAD program. This exhibit breaks out in detail the Fiscal Year 2002 Planned Program. No funding has been cut from the THAAD program. Funding was consolidated into a uniform budget and does account for funding for EMD and the transfer to production in later years.

95. Senator SESSIONS. General Kadish, what is BMDO's level of support under PBD 816 for PAC-3 in the out years? I am concerned about funding all ten Army Patriot Battalions and feel the Department has an inherent responsibility to support all ten battalions, not just the Army.

General KADISH. The Department is still undergoing its Quadrennial Defense Review process. The QDR will address force structure issues such as the number of Patriot Battalions. PBD 816 transferred all funding to the Army so that they could assess their total warfighting capability and affordability constraints. The Department's intent with regard to PBD 816 is to transfer \$3B in PAC-3 procurement from BMDO to the Army. However, final PAC-3 funding is subject to the QDR and subsequent DOD guidance over the FYDP.

QUESTIONS SUBMITTED BY SENATOR SUSAN COLLINS

TECHNOLOGY

96. Senator COLLINS. General Kadish, some defense experts are questioning the technology that is available today and in the near-term that would be available to contribute to the development of a robust, layered BMD System. You have addressed some of the program elements and activities in your written testimony, but I would ask that you elaborate on some of the promising technologies which could lead to a robust, layered missile defense system, and tell us in what time-frame these technologies could be deployed? Further, can you briefly discuss how your proposed capabilities-driven approach, vice requirements-driven, will benefit the overall goal of a robust, layered missile defense system?

General KADISH. We are exploring multiple technologies that will enhance current capabilities or form the foundation for the development of new missile defense capabilities. Currently, we have funded a number of concept definition and risk-reduction efforts intended to support this approach. Although we have not yet developed comprehensive schedules showing deployment time frames, as BMD technologies emerge and mature and we progress in our development activities, we will further define schedules and make overall architecture decisions consistent with our Block acquisition approach.

Given the considerable technical challenges of our mission and the dynamic nature of the threat, a traditional acquisition process that includes rigid, predetermined user requirements does not provide the requisite flexibility to build missile defenses efficiently. For this reason, capability-based acquisition is appropriate for this program.

BMDO will conduct a structured acquisition process, applying requirements in the form of technological objectives and goals that can and will be adjusted based upon the results of research, experimentation, and testing. These standards differ from the conventional build-to-requirements process in that they will evolve in parallel with capabilities, allowing us to significantly reduce schedule and cost risk.

We successfully followed this approach in our early ICBM programs, when progress was paced by the evolution of our technological and engineering maturity. As needed and possible, those capabilities were enhanced. In accordance with our Block acquisition approach, BMDO and the Department will conduct rigorous annual reviews of all program activities to ensure that we proceed steadily towards an architecture that will maximize defensive capabilities. At these decision points, programs will be evaluated on the basis of technological maturity, mission requirements, technology readiness levels, cost, resource availability, and schedule. Throughout the CINC's and Service Users will be instrumental in the development process so that, with each block, we move steadily forward towards a system with ever-increasing military utility that incorporates complementary operational capabilities and that minimizes life cycle cost.

97. Senator COLLINS. General Kadish, in your written testimony you briefly describe the boost phase intercept. Would you describe in more detail the advantages of intercepting a missile during its boost phase? Further, is it fair to say that the Airborne Laser program is the most mature boost-phase intercept system currently under development?

General KADISH. Interception in boost phase has many advantages. It precludes the deployment of countermeasures, such as decoys, in later phases of flight. The payload falls short of its intended target presenting the attacker with the possibility the warhead, potentially carrying nuclear, biological or chemical agents, will fall on his territory. Also, the missile is easily identified by its bright exhaust plume. Furthermore, the area that can be defended is the entire operational area of the threat missile—potentially global for the intercept of an ICBM. Finally, any intercept in boost phase lessens the load for other elements in the layered BMD System.

The ABL program is the most mature boost-phase intercept system currently under development.

98. Senator COLLINS. General Kadish, if the Airborne Laser is close enough to the missile being launched, will it have the capability to destroy both long-range and short-range missiles? For example, will it be able to destroy short-range North Korean Scud missiles, as well as the long-range Taepo Dong 2 missile under development in North Korea?

General KADISH. ABL is designed to kill ballistic missiles at a range of several hundred kilometers while the missile is boosting. The specific range depends on the details of the construction of the missile and the altitude at which booster burn out

occurs. Specifics on ABL capabilities (range, power requirements) against certain missiles, such as the Taepo Dong 2, are classified.

99. Senator COLLINS. General Kadish, for the past several years, this committee and both bodies of Congress have voted to authorize and appropriate funding for the Airborne Laser, yet it has not been certified as compliant with the ABM Treaty, is that correct?

General KADISH. That is correct.

100. Senator COLLINS. General Kadish, in your written testimony you briefly discuss sea-based boost-phase defense. Would you further elaborate on the benefits of sea-based missile defenses? Further, do you intend to pursue development of sea-based defenses against a long-range missile attack on the United States?

General KADISH. Sea-based missile defenses are complementary to land-based and airborne missile defense platforms. Sea-based defense offers several key advantages:

- Ships may already be forward deployed in the theater, monitoring missile launches. This real-time reaction to a hostile missile launch is necessary to destroy the missile as close to the launch site as possible.
- While territorial waters are a concern, ships can maneuver without being encumbered by land-based host nation restrictions or, in the case of airborne platforms, obtaining host agreements from foreign countries for temporary basing, maintenance, and re-supply.
- For specific periods of time, they can be operationally ready 24 hours a day; aircraft would be stressed to provide such a capability over a long period of time.
- Deployment of a contingency Sea-based Midcourse may be done more rapidly with an existing fleet of Aegis-equipped cruisers.

It is our intent to develop the Sea-Based Midcourse System to intercept and destroy medium to long-range ballistic missiles in the midcourse ascent phase of the exo-atmospheric battlespace.

[Whereupon, at 1:10 p.m., the committee adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2002

THURSDAY, JULY 19, 2001

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

BALLISTIC MISSILE DEFENSE POLICIES AND PROGRAMS

The committee met, pursuant to notice, at 9:30 a.m. in room SH-216, Hart Senate Office Building, Senator Carl Levin (chairman) presiding.

Committee members present: Senators Levin, Lieberman, Cleland, Reed, Bill Nelson, E. Benjamin Nelson, Warner, Inhofe, Allard, Sessions, and Bunning.

Committee staff members present: David S. Lyles, staff director; Christine E. Cowart, chief clerk; and Anita R. Raiford, deputy chief clerk.

Majority staff members present: Richard D. DeBobes, counsel; Richard W. Fieldhouse, professional staff member; and Kenneth M. Crosswait, professional staff member.

Minority staff members present: Judith A. Ansley, deputy staff director for the minority; Brian R. Green, professional staff member; and Scott W. Stucky, minority counsel.

Staff assistants present: Thomas C. Moore, Jennifer L. Naccari, and Michele A. Traficante.

Committee members' assistants present: Menda S. Fife, assistant to Senator Kennedy; Barry Gene (B.G.) Wright, assistant to Senator Byrd; Frederick M. Downey, assistant to Senator Lieberman; Andrew Vanlandingham, assistant to Senator Cleland; Elizabeth King, assistant to Senator Reed; Davelyn Noelani Kalipi, assistant to Senator Akaka; Peter A. Contostavlos, assistant to Senator Bill Nelson; Eric Pierce, assistant to Senator Ben Nelson; J. Mark Powers, and John A. Bonsell, assistants to Senator Inhofe; George M. Bernier, III, assistant to Senator Santorum; Douglas Flanders and Charles Cogar, assistants to Senator Allard; Arch Galloway II, assistant to Senator Sessions; Kristine Fauser, assistant to Senator Collins; and Derek Maurer, assistant to Senator Bunning.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Chairman LEVIN. Good morning, everybody. The committee meets this morning to continue to receive testimony on ballistic

missile defense policies and programs from three individuals with extensive experience in foreign and defense policy. I want to welcome to the committee Samuel Berger, Chairman of Stonebridge International and former Assistant to the President for National Security Affairs; Philip Coyle, Senior Advisor at the Center for Defense Information and former Director of Operational Test and Evaluation at the Department of Defense; and Richard Perle, Resident Scholar at the American Enterprise Institute and former Assistant Secretary of Defense for International Security Policy.

This is the committee's third hearing on missile defense policies and programs in the proposed fiscal year 2002 amended budget request. Over the last 2 weeks, Deputy Secretary of Defense Paul Wolfowitz and the Director of the Ballistic Missile Defense Organization, Lt. Gen. Ronald T. Kadish, USAF, have presented the administration's proposal for an "aggressive" research and development program for ballistic missile defense, costing \$8 billion in fiscal year 2002 alone, a 57 percent increase in spending on missile defense over the current fiscal year.

Despite the unfortunate absence of specific details on how the administration would spend that \$8 billion in the next fiscal year (details we have been promised by the end of the week), our hearings have helped to shed some light on the administration's plans for a national missile defense system.

We learned that one or more aspects of this research and development program could either, "conflict with the ABM Treaty," as we heard Wednesday of last week from Deputy Secretary of Defense Paul Wolfowitz, or, "bump up against," ABM Treaty restrictions, as we heard Thursday of last week, also from Secretary Wolfowitz, "within months rather than years."

Secretary of State Colin Powell gave a somewhat different slant this week when he said he did not want to say "months." It certainly is not going to be years before we would, in his words, "hit the wall of that treaty." We learned that there are three specific activities for which funds are requested for fiscal year 2002 that would likely conflict or bump up against the treaty.

We learned the administration would like the Fort Greely and Shemya Island test bed to, "give us the option for rudimentary operational capability," as quickly as possible. In other words, a major purpose of the Fort Greely and Shemya activities is to provide a rudimentary operational capability. The test bed is but one of two purposes for which these sites will be used.

Finally, I was heartened to see the beginnings of a spirit of flexibility in how the administration would approach the sensitive issue of the ABM Treaty. In the event that modifications to that treaty cannot be achieved with Russia, Senator Warner asked on Tuesday whether, "if for some reason these negotiations with Russia do not meet the goals that the President has laid down, whether he would come back to Congress in a consultative process."

Secretary Wolfowitz responded, "we will be consulting closely with Congress throughout the coming months." Senator Warner continued by stating that he hoped that the President "would have further consultation as necessary with Congress before exercising the treaty provision of withdrawal."

I also believe that consultation is critical before such a momentous shift is made. Drawing on their wealth of experience, today our witnesses can help us better understand the consequences of the administration's budget actions. The critical question is whether testing in violation of the ABM Treaty or deploying a national missile defense system, if done unilaterally by withdrawing from the ABM Treaty without a new arrangement to replace it, would leave America more or less secure.

Senator Warner.

STATEMENT OF SENATOR JOHN WARNER

Senator WARNER. Thank you, Mr. Chairman. I join you in welcoming our three witnesses, who I have known for a very long time. They bring to the hearing corporate knowledge of foreign affairs that goes back many decades. Mr. Berger, you certainly earned a place in history by serving President Clinton very loyally. I also feel you set new parameters for consultation with Congress. Many times the President, through you, invited Members down to work with him, particularly in the troublesome period of Bosnia and Kosovo, and I value those consultations and respect them, and I thank you for those meetings.

Mr. Perle, you are an icon, who needs no further elaboration from me. Mr. Coyle, while I do not know you that well, I studied many times your pragmatic and objective assessments of those serious issues, particularly relating to the subject before us today. So I welcome you all.

We awakened this morning to find that our distinguished Majority Leader Daschle made some fairly troublesome statements, in my judgment, with regard to our President. President Bush is making a conscientious effort to consult with our allies and to initiate preliminary negotiations with Russia on the subject before us today, and that is missile defense.

It seems to me in my 23 years in the Senate, as I have observed colleagues in the Senate, they have always at least given the President, irrespective of party, some latitude as they undertake their primary function under the Constitution, that is, to be the chief architect of our foreign policy and security issues. I would hope during the course of the next 24 hours that somehow this rhetoric from Majority Leader Daschle can be resolved.

Also, in this hearing room we have had some pretty tough criticism directed at our President. While I believe our hearings have been very productive and a major step forward in seeking to better understand the necessity for our country to look at a new relationship with Russia, and to move forward with a series of options to explore the full parameters of how we construct a missile defense system, we too have been pockmarked here and there with some pretty tough criticism.

Even in this morning's paper there seems to be some very interesting and constructive comments by Russian President Putin, toward the actions of our President. I remain very confident that our President can forge a mutually acceptable new framework, and to allow this country and, indeed, others to proceed toward the necessity for missile defense.

Mr. Chairman, I am anxious, as you are, to proceed. I would note, however, that Secretary Wolfowitz, as you stated to General Kadish in our last hearing, did a remarkable job of testifying for 2 consecutive days. These sessions were in excess of 4 hours, and we covered, I think, the basics for this committee and the Senate as a whole. It was excellent. I thank the chairman.

Chairman LEVIN. Thank you very much, Senator Warner, and a very warm welcome to you, Sandy. It is great to see you again. Please proceed.

STATEMENT OF HON. SAMUEL R. BERGER, CHAIRMAN, STONEBRIDGE INTERNATIONAL, FORMER ASSISTANT TO THE PRESIDENT FOR NATIONAL SECURITY AFFAIRS

Mr. BERGER. Thank you, Mr. Chairman, and thank you, Senator Warner, for those kind words. Members of the committee, I thank you for the invitation to appear today on one of the most consequential national security issues our Nation faces. These are difficult issues, and they need full discussion among people of varying perspectives conducted with goodwill and with a shared interest in advancing the security of the United States.

Mr. Chairman, the issue is not whether to protect America, but how best to protect America. There is an emerging threat from proliferation of long-range missiles. Missile defense may be an appropriate part of our response, but how we get there matters. We must pursue a strategy that advances our security interest, not just with tunnel vision, but also with peripheral vision.

That is why I find the missile defense that Secretary Wolfowitz sketched out over the past several days troubling. It requests congressional support for activities the administration says are likely to "bump up against" the ABM Treaty "within months."

To me, that means either we will be constrained by or withdrawing from the treaty in the absence of an agreement with the Russians in a very short timeframe. It is a schedule that key experts tell us is not necessary to vigorously pursue a range of missile defense technologies. It means we could incur serious cost and risks before we know what threat our system is designed to target, whether the system is likely to work against that threat, the cost and tradeoffs involved (including within the defense budget), and the overall consequences for our national security. It is as if the objective is to put the most pressure on the treaty and collapse the time frame for negotiations.

The Bush administration's focus, in my judgment, is at this stage too narrow. The issue is, how do we enhance the overall security of the American people in a world with complex and diverse threats and overlapping security equities. The administration is correct to give serious weight to the emerging threat from the proliferation of ballistic missiles. But we must also give serious weight to former adversaries still armed with nuclear weapons, in particular Russia, whose actions can affect our security; to allies whose solidarity with us is a strategic asset and whose cooperation to build any missile defense system is highly desirable if not necessary; to bountiful but not unlimited budgetary resources; and to a multitude of threats—some old, some new—which impose the obligation to establish priorities and balance.

I welcome Secretary Powell's statement last week that we intend to make a serious effort with the Russians to modify the current ABM Treaty and seek a new strategic framework as the President has discussed. But the game plan outlined by the Pentagon last week proceeds on a timetable that makes it impossible for any such negotiations to succeed.

Indeed, we may be creating a self-fulfilling prophecy, leading almost inevitably to a breach or unilateral abrogation which, at the very least, is premature. In the past 6 months, I have heard a number of different objectives articulated for our missile defense program. But there is little detail regarding the capabilities and architecture that would be required to accomplish these objectives. Each would have different potential consequences for the Russian deterrent.

How can we expect to negotiate modifications to the ABM Treaty or a change in decades of strategic policy with the Russians in a matter of months when the purpose, architecture, and scope of our missile defense system are all undefined? This is a collision course to unilateral breach or abrogation sooner rather than later.

Is that necessary? Mr. Coyle will speak to the view he has expressed that testing a range of technologies which would require modifications to the ABM Treaty is, "many years away." I welcome the successful flight test conducted last weekend. But the ABM Treaty is not constraining vigorous pursuit of a range of technologies.

Why not unilaterally abrogate the treaty? Does it matter?

Let me address these questions: No other country can ever have a veto over U.S. security requirements. But that does not end the argument. For in calculating our national interest, we need to include reasonably foreseeable consequences of our actions.

What are the risks and costs, particularly from what would be seen as a precipitous withdrawal from the treaty?

First, as President Bush has said, Russia is no longer our enemy, but it is also true that a cycle of instability, uncertainty, danger, and paranoia is still possible. In very recent years, we have been through crises in the Balkans, the Middle East, the Persian Gulf, and elsewhere in which the United States and Russia have been at tense, fast-moving, confusing, and contentious moments of crisis. Even with the end of the Cold War, our two countries still harbor distrust, burdens of history, fierce national pride, and large nuclear arsenals. Uncertainty about each other's capabilities and intentions still can be dangerous. Agreed constraints, transparency, and verification of our nuclear capabilities are important; we erode this as we move away from agreed rules.

Second, while changes in the ABM Treaty may be warranted, agreed constraints on defenses are not obsolete. The purpose of the ABM Treaty was to decrease each side's sense of vulnerability to preemption or coercion, and therefore, to keep their nuclear guns in the holster, and not on a hair trigger. While the political context has changed, the strategic dynamic changes more slowly. Without the ABM Treaty, or a modification thereof, the Russians have said—and there is risk in ignoring this—that they will act in ways they believe will decrease their vulnerability, not just to U.S. attack—which is, of course, hard to conceive—but to U.S. coercion,

which for the Russians is not hard to conceive. In the context of what is seen as a precipitous abrogation by us, unfortunately they would have sympathy from much of the world. There are steps which are not beyond their means, including withdrawing from the START and INF Treaties, adding warheads to strategic missiles, and redeploying tactical nuclear weapons at sea, or on NATO's periphery. These all would take us back down the path of instability in a dangerous world.

Again, none of this is to suggest that Russia should have a trump card. It does mean to me, however, that the path to unilateral abrogation of the ABM Treaty, particularly without a serious effort at modification, is not without risk that must be part of our calculation of our national interest.

In this respect, I agree with Henry Kissinger. "Unilaterally American decisions," he recently wrote, "should be a last resort. The most powerful country in the world should not adopt unilateralism until the possibilities of agreement have been fully explored."

There are other essential questions that need to be clarified if we are to move forward in a way that looks at our security interests broadly, not narrowly.

First, what will be the effect of missile defense on stability in Asia? We acknowledge that this system we seek to build could defeat China's small nuclear deterrent. Our answer seems to be: they are going to build up anyway. I think that is a strange posture for the United States which would be in effect, legitimizing and perhaps accelerating China's strategic modernization. What impact will that have on the intertwined Asian nuclear dynamic, on India's nuclear program, and Pakistan's? On the calculations across the Korean peninsula? On the sense of vulnerability, and the incipient nuclear debate, in Japan? This all must be part of the equation as we decide to move forward.

Second, are we looking at weapons of mass destruction through the wrong end of the telescope? There is a significant possibility that the United States will be attacked by a nuclear, chemical, or biological weapon over the next decade. But I agree with the former chairman of this committee, Sam Nunn, who recently wrote, "the clear and present danger is not from North Korean missiles that could hit America in a few years . . . the likeliest nuclear attack against the United States would come from a warhead in the belly of a ship or the back of a truck."

The obvious response to this argument is that it is not either/or. We should build a missile defense to bolster deterrents and provide insurance in case deterrence fails and do more to protect ourselves against other threats, including the more probable attacks in the United States. But, in fact, as the members of this committee know, in the real world, we cannot avoid choices, setting priorities, and allocating resources.

Missile defense appears to be the central strategic imperative of the Bush administration, with virtually everything else subordinated to it. The allies, Russia, Asia, the merits of arms control, other defense modernization needs, other WMD threats, and cooperation with the Russians through a fully funded Cooperative Threat Reduction (CTR) program to control nuclear materials seem

to have been forgotten. The essential job of the administration and Congress is to strike the right balance.

Let me briefly suggest how I propose we should go forward. First, we should continue to pursue actively a range of potential missile defense technologies and define the scope of the threat, but not engage in a 2-minute drill that is likely to put us on a collision course with the ABM Treaty and most of the rest of the world in the next few months.

Second, with greater clarity on the scope of the system, we should press for an agreement with the Russians on new defensive constraints, and engage in real consultations with the allies.

Third, we should vigorously fund our theater missile defense programs, which are needed on today's battlefield and need not conflict with the ABM Treaty.

Fourth, we must see the issue before us as WMD defense, not simply national missile defense. To the extent the American people think about this in bed at night, I believe their greatest fears relate to a terrorist attack: toxic chemicals placed in the water supply or an anthrax attack that could swiftly sweep across the country or a nuclear device in a truck. There is far more we must do to fight virulent anti-American terrorists who are seeking these weapons and to protect our critical infrastructure.

Fifth, we can reduce offensive nuclear arsenals to levels commensurate with today's needs, either bilaterally or unilaterally verified through existing strategic arms accords, which still have great value for our security.

Sixth, we must address the needs and requirements of tomorrow's military across-the-board, as Secretary Rumsfeld's current defense review will require, for we need a strong defense and the right defense, and that will require adequate resources and difficult choices.

Seventh, we should resume serious negotiations with the North Koreans to stop their missile program—the front edge of the threat. I do not know whether a verifiable, acceptable agreement is possible. I do know that the missile testing moratorium we negotiated in 1999 has slowed their program and that we will never find out what is possible if we do not reengage in a serious way at a serious level.

Mr. Chairman, our first obligation is to protect America. But America's national security interests are not one-dimensional. I hope the United States will fashion a course that provides that protection with wide-angle vision.

Thank you.

[The prepared statement of Mr. Berger follows:]

PREPARED STATEMENT BY HON. SAMUEL R. BERGER

Mr. Chairman, members of the committee: I thank you for the invitation to appear today on one of the most consequential national security issues our Nation faces. These are difficult issues, and they need full discussion among people of varying perspectives, conducted with good will and with a shared interest in advancing the security of the United States.

Mr. Chairman, the issue is not whether to protect America but how best to protect America. There is an emerging threat from proliferation of long-range missiles. Missile defense may be an appropriate part of our response. But how we get there matters. We must pursue a strategy that advances our overall security interests, not just with tunnel vision but also peripheral vision.

That is why I find the missile defense outline that the administration sketched out to this committee over the past several days troubling. It requests congressional support for activities the administration says are likely to "bump up against" the ABM Treaty "within months." To me, that means either we will be constrained by or withdrawing from the treaty in the absence of an agreement in a very short timeframe. It is a schedule that key experts tell us is not necessary to vigorously pursue a range of missile defense technologies. It means we could incur serious costs and risks before we know what threat our system is designed to target, whether the system is likely to work against that threat, the cost and tradeoffs involved—including within the defense budget—and the *overall* consequences for our national security.

It's as if the objective is to put the most pressure on the treaty and collapse the timeframe for negotiations.

The Bush administration's focus appears, at this stage, too narrow. The issue is: how do we enhance the overall security of the American people in a world with complex and diverse threats and overlapping security equities. The administration is correct to give serious weight to the emerging threat from the proliferation of ballistic missiles. But we must also give serious weight to former adversaries still armed with nuclear weapons, in particular Russia, whose actions can affect our security; to allies whose solidarity with us is a strategic asset and whose cooperation to build any missile defense is highly desirable if not necessary; to bountiful but not unlimited budgetary resources; and to a multitude of threats—some old, some new—which impose the obligation to establish priorities and balance.

I welcome Secretary Powell's statement last week that we intend to make a serious effort with the Russians to modify the current ABM Treaty and seek a new strategic framework as the President has discussed. But the game plan outlined by the Pentagon last week proceeds on a timetable that makes any such negotiation virtually impossible to succeed.

Indeed, we may be creating a self-fulfilling prophecy, leading almost inevitably to breach or unilateral abrogation which, at the very least, is premature. In the past 6 months, I have heard a number of different objectives articulated for our missile defense program. But there is little detail regarding the capabilities and architecture that would be required to accomplish these objectives. Each would have different potential consequences for the Russian deterrent.

How can we expect to negotiate modifications to the ABM Treaty with the Russians in a matter of months when the purpose, architecture and scope of the system are undefined? This is a collision course to unilateral breach or abrogation sooner rather than later.

Is that necessary? Mr. Coyle will speak to the view he has expressed that testing a range of technologies which would require modifications to the ABM Treaty is "many years away." I welcome the successful flight test conducted last weekend. But the ABM Treaty is not constraining vigorous pursuit of a range of technologies.

Why not unilaterally abrogate? Does it matter?

First, let me be clear. No other country ever can have a veto over U.S. security requirements. But that doesn't end the argument. For in calculating our national interest, we need to include reasonably foreseeable consequences of our actions.

What are the risks and costs, particularly from what would be seen as a precipitous withdrawal from the treaty?

First, as President Bush has said, Russia no longer is our enemy, but it also is true that a cycle of instability, uncertainty, danger and paranoia still is possible. In very recent years, we've been through crises in the Balkans, the Middle East, the Gulf and elsewhere in which the U.S. and Russia have been at tense, fast moving, confusing, and contentious moments of crises. Even with the end of the Cold War, our two countries still harbor distrust, burdens of history, fierce national pride and large nuclear arsenals. Uncertainty about each other's capabilities and intentions still can be dangerous. Agreed constraints, transparency and verification of our nuclear capabilities are important; we erode this as we move away from agreed rules.

Second, while changes in the ABM Treaty may be warranted, agreed constraints on defenses are not obsolete. The purpose of the ABM Treaty was to decrease each side's sense of vulnerability to preemption and coercion and, therefore, to keep their nuclear guns in the holster, not on a hair trigger. While the political context has changed, the strategic dynamic changes more slowly. Without the ABM Treaty, or a modification thereof, the Russians have said—and there is risk in ignoring this—that they will act in ways they believe will decrease their vulnerability, not just to U.S. attack—which, of course, is hard to conceive—but of U.S. coercion, which for the Russians is not hard to conceive. In the context of what is seen as a precipitous abrogation by us, unfortunately they would have sympathy from much of the world. There are steps which are not beyond their means, including withdrawing from the

START and INF Treaties, adding warheads to strategic missiles, or redeploying tactical nuclear weapons at sea or on NATO's periphery. These all take us back down the path of instability in a dangerous world.

Again, none of this is to suggest that Russia should have a trump card. It does mean to me, however, that the path to unilateral abrogation of the ABM Treaty, particularly without a serious effort at modification, is not without risks that must be part of one calculation of our national interest.

In this respect, I agree with Henry Kissinger. "Unilateral American decisions," he recently wrote, "should be a last resort; the most powerful country in the world should not adopt unilateralism until the possibilities of agreement have been fully explored."

There are other essential questions that need to be clarified if we are to move forward in a way that looks at our security interests broadly, not narrowly.

First, what will be the effect of missile defense on stability in Asia? We acknowledge that the system we seek to build could defeat China's small nuclear deterrent. Our answer seems to be: they're going to build up anyway. That is a strange posture for the U.S.: in effect, legitimizing and perhaps accelerating China's strategic modernization. What impact will that have on the intertwined Asian nuclear dynamic? On India's nuclear programs, and Pakistan's? On calculations across the Korea Peninsula? On the sense of vulnerability, and the incipient nuclear debate, in Japan? This must all be part of the equation as we decide how to move forward.

Second, are we looking at the weapons of mass destruction threat through the wrong end of the telescope? There is a significant possibility that the United States will be attacked by a nuclear, chemical or biological weapon over the next 10 years. But I agree with the former chairman of this committee, Sam Nunn: "The clear and present danger," he recently wrote, "is not from North Korean missiles that could hit America in a few years . . . The likeliest nuclear attack against the United States would come from a warhead in the belly of a ship or the back of a truck."

The obvious response to this argument is that it is not either/or. We should build a missile defense to bolster deterrence and provide insurance in case deterrence fails and do more to protect ourselves against other threats, including more probable attacks in the U.S. But, in fact, in the real world, we cannot avoid choices, setting priorities, and allocating resources. Missile defense appears to be the central strategic imperative of the Bush administration, with virtually everything else subordinated to it: the allies, Russia, Asia, the merits of arms control, other defense modernization needs, other WMD threats, including cooperation with the Russians through a fully-funded Cooperative Threat Reduction (CTR) program to control nuclear materials, now inadequately protected in Russia and in quantities that could build 60,000 nuclear weapons.

The essential job of the administration and Congress is to strike the right balance. Let me suggest how I think we should proceed going forward:

- First, we should continue to pursue actively a range of potential missile defense technologies and define the scope of the threat, but not engage in a "2-minute drill" that is likely to put us on a collision with the ABM Treaty and most of the world in the next few months.
- Second, with greater clarity on the scope of the system, we should press for agreement with the Russians on new defensive constraints and engage in real consultation with allies.
- Third, we should vigorously fund our theater missile defense programs, which are needed on today's battlefield and need not conflict with the ABM Treaty.
- Fourth, we must see the issues before us as *WMD* defense, not simply *national missile defense*. To the extent the American people think about this in bed at night, I believe their greatest fears relate to terrorist attack: toxic chemicals placed in the water supply or an anthrax attack that could quickly sweep across the country or a nuclear device in a truck. There is far more we must do to fight virulent anti-American terrorists who are seeking these weapons and to protect our critical infrastructure.
- Fifth, we can reduce offensive nuclear arsenals to levels commensurate with today's needs, either bilaterally or unilaterally, verified through existing strategic arms accords which still have great value for our security.
- Sixth, we must address the needs and requirements of tomorrow's military across-the-board, as Secretary Rumsfeld's current defense review will require, for we need a strong defense and the right defense, and that will require adequate resources and difficult choices.
- Seventh, we should resume serious negotiations with the North Koreans to stop their missile program—the front edge of the threat. I don't know whether a verifiable, acceptable agreement is possible. I do know that the

missile testing moratorium we negotiated in 1999 has slowed their program and that we'll never find out what's possible if we don't reengage in a serious way at a serious level.

Mr. Chairman, our first obligation is to protect America. But America's national security interests are not one-dimensional. I hope the United States will fashion a course that provides that protection with wide-angle vision.

Thank you.

Chairman LEVIN. Thank you very much, Mr. Berger.

Mr. Coyle.

**STATEMENT OF HON. PHILIP E. COYLE, SENIOR ADVISER,
CENTER FOR DEFENSE INFORMATION, FORMER DIRECTOR,
OPERATIONAL TEST AND EVALUATION, DEPARTMENT OF
DEFENSE**

Mr. COYLE. Mr. Chairman, members of the committee, I appreciate this opportunity to discuss the National Missile Defense (NMD) Program. NMD is the most difficult program the Department of Defense has attempted. This is as true today as it has been for the 30 years that national missile defense has been on the American political scene. While the technology that might be used for NMD has changed over the years, the overall difficulty at each stage in the development of new technology has not.

Some have compared the difficulty of NMD with the Manhattan Project, but a difference is that NMD is being developed without either the urgency of the threat or the constituency of wartime emergency.

The NMD program or, rather, a portion of it, which is now being called the mid-course defense segment, has begun to demonstrate considerable progress. The battle management command and control and communications system has progressed well. The X-band radar performance looks promising, and an initial systems integration capability has been demonstrated, although achieving full system of systems interoperability is recognized as one of the most challenging aspects of NMD development.

There are many limitations in the test program so far, but notwithstanding the limitations in the testing program and failures of important components in all of the first four flight intercept tests, including the two that achieved intercept, the program has demonstrated considerable progress.

To address the limitations in the testing program, while I was in the Office of the Secretary of Defense, I made over 50 recommendations to enhance NMD testing. These recommendations included more realistic flight engagements, tests with simple countermeasures beyond those planned, tests with simple tumbling re-entry vehicles (RVs), and tests with multiple simultaneous engagements. BMDO is now implementing many of those recommendations. For example, I recommended that the program develop more realistic engagement geometries, either with launches of interceptors or targets from the Kodiak launch complex in Kodiak, Alaska, and BMDO has recently announced that they will be implementing this recommendation.

Developmental tests in a complex program, especially those conducted very early, contain many limitations and artificialities, some driven by the need for specific early design data, and some driven by test range safety considerations. Also, the program was never

structured to produce operationally realistic test results early. Accordingly, it was not realistic to expect that early test results could have supported a full deployment decision in the Clinton administration, even if all of the tests had been unambiguously successful, which they were not.

Similarly, the early test results to date, including the latest flight-intercept tests last Saturday, do not yet justify a Bush administration decision to deploy an operational system in Alaska. The Bush administration is proposing a very aggressive new testing program. Such a test program, with many activities conducted in parallel, will be necessary if deployment of even a primitive operational capability is expected this decade.

For example, four or five tests per year of the midcourse defense segment could complete in 4 or 5 years the 20 or so developmental tests needed before realistic operational testing could begin. This would assume that all 20 tests were successful and that no tests needed to be repeated because of setbacks, surprises, or failures.

The midcourse defense segment of the Clinton administration is the farthest along, technically, and will be a necessary part of any layered system. Also, the Bush administration has emphasized mobile land-based, sea-based, airborne, and space-based approaches to these segments, whereas the Clinton administration was focused on a fixed land-based mid-course system.

This array of options and the declared intention to also defend our friends and allies around the world has produced confusion about what we will actually try to build, since all of these options are probably not affordable. Each of the approaches to NMD has its strengths and weaknesses. Mid-course NMD provides national coverage in a relatively cost-effective way, but has been lambasted by scientists for its inability to discriminate decoys and countermeasures.

Boost-phase NMD avoids the problem with countermeasures and decoys, but requires interceptors to be very close to enemy territory, and confronts the operators with breathtakingly short reaction times. The sensing radars and satellites must begin to discriminate and characterize the enemy missiles within seconds, and intercept must occur within 3 or 4 minutes, possibly within 120 seconds in some scenarios.

A boost-phase system must be essentially computer-operated and autonomous, with no time for consultation with the President, the National Security Advisor, or the Secretary of Defense. Also, boost-phase systems can be vulnerable to certain countermeasures and tactics themselves.

Terminal-phase systems have the advantage of atmospheric stripping, that is, using the atmosphere to strip out lighter objects, decoys, and chaff that are designed to conceal the desired target. However, the effects of the atmosphere on decoys are observable only during the last 60 seconds or so of flight and, once again, there are countermeasures an enemy could use.

In general, regardless of which phase of NMD you are talking about, the systems must achieve reliability, availability, and effectiveness levels that are rarely, if ever, achieved by military systems and, when parsed out into various components and subsystems, the

required reliability of those components and subsystems becomes exceedingly high.

There is nothing wrong with testing the program the Department has been pursuing, so long as the desired results match the desired pace of acquisition decisions to support deployment. However, a more aggressive testing program with parallel paths and activities will be necessary to achieve an effective operational capability by 2005 or even for several years thereafter. This means a test program that is structured to anticipate and absorb setbacks that inevitably occur.

I am pleased that the NMD program is developing test plans that move in this direction. However, the Test and Evaluation Master Plan (TEMP) is obsolete, and much work must be done just to develop detailed test plans and a TEMP which cover the administration's newest research, development, test, and evaluation (RDT&E) program for NMD. As these plans are developed, continued interaction with the operational test and evaluation organizations will be essential. I recommend that this committee follow these developments closely and encourage BMDO and the NMD program offices to improve the frequency and candor of their interactions with these operational test experts.

Considering a layered system, I would expect that each segment, boost phase, mid-course, and terminal, could each require 25 or 30 tests before they get to realistic operational testing, bringing the total for the full system to over 100 tests.

Mr. Chairman, deployment means the fielding of an operational system with some military utility that is effective under realistic combat conditions against realistic threats and countermeasures, possibly without adequate prior knowledge of the target cluster composition, timing, trajectory, or direction, and one operated by military personnel at all times of the day and night and in all weather. Such a capability is yet to be shown practicable for NMD. These operational considerations will become an increasingly important part of test and simulation over the coming years.

Mr. Chairman, in my prepared testimony, I also discuss the relationship between NMD and the ABM Treaty, NMD and deterrence, and the importance of greater priority on Theater Missile Defense (TMD). I will skip those sections in the interest of time and just proceed to my conclusion.

The technical and political challenges for NMD are such that careful oversight will be required by this committee for many years, probably decades, to come. To demonstrate an effective operational capability, the service test organizations who work together jointly on NMD provide an essential operational perspective. This operational perspective is vital for any military system, but particularly so for NMD because of its complexity.

Working with the Director, Operational Test and Evaluation, and the Office of the Secretary of Defense, the service operational test agencies provide valuable insights to the NMD program office, to the services and OSD leadership, and to Congress. The early involvement of the operational test community can help avoid setbacks and delays and help solve problems early that will be much more difficult and expensive to fix later.

The early involvement of the operational test community will be key to NMD systems that really work in realistic combat environments. I am confident that the future and ultimate success of NMD will depend on the OT&E community. It is through the operational test community that you will know whether Theater Missile Defenses can reliably protect our sons and daughters serving in the military overseas.

It is through the operational test community that you will know what kind of protection an NMD system can provide from unauthorized or accidental launches, ICBM launches from Russia or China, as well as intentional launches from States of concern, and it is through the operational test community that NMD and Theater Missile Defense as well has its best chance for success.

Throughout, the DOD operational test community will require the encouragement and the steadfast support of this committee and Congress. I urge this committee and Congress to require the assessments of the operational test agencies in congressional reviews of the progress of NMD.

Mr. Chairman, I will be pleased to take your questions.

[The statement of Mr. Coyle follows:]

PREPARED STATEMENT BY HON. PHILIP E. COYLE

INTRODUCTION

Mr. Chairman, members of the Committee, I appreciate this opportunity to discuss the National Missile Defense (NMD) program.

From 1994 to 2001, I was an Assistant Secretary of Defense and the Director, Operational Test and Evaluation, in the Department of Defense. During those 6½ years, I became the longest-serving Director in the 18-year history of the office. I have spent more than 40 years in defense testing, including testing of the warheads of the original Safeguard ABM system in Nevada and Alaska more than 30 years ago. Currently, I am serving as a Senior Advisor to the Center for Defense Information.

NMD is the most difficult program the Department of Defense has attempted, more difficult than the F-22 Raptor, the Land Attack Destroyer (DD-21), or the Abrams M1A2 tank complete with battlefield digitization. This is as true today as it has been for the 30 years that national missile defense has been on the American political scene. While the technology that might be used for NMD has changed over the years, the overall difficulty at each stage in the development of new technology has not. Some have compared the difficulty of NMD with the Manhattan Project, but a difference is that NMD is being developed without either the urgency of the threat or the constituency of a wartime emergency. In fact, one question that has dogged NMD is who exactly is the enemy? Is it North Korea? Is it Iran, Iraq, or Libya? Is it China or Russia? Or is it all those countries at once?

You requested that today's testimony focus on the impact of the test results to date on technology maturity and deployment schedules. You also indicated I should address the relationship between NMD and the Anti-Ballistic Missile (ABM) Treaty, NMD and deterrence, and NMD and Theater Missile Defense (TMD), and the current proposals to design, test, and deploy an effective missile defense system. Throughout my testimony, you will hear my conviction about the value of early and close coupling of the operational test perspective during the whole life cycle of a major system such as NMD, and especially during development. First, I will discuss the progress so far.

PROGRESS SO FAR

The NMD program—or rather what is now being called the Midcourse Defense Segment—has begun to demonstrate considerable progress toward its defined goals. The Battle Management Command, Control, and Communications (BMC³) system has progressed well. Potential X-Band Radar performance looks promising, as reflected in the performance of the Ground Based Radar-Prototype (GBR-P). An initial systems integration capability has been demonstrated, although achieving full

system-of-systems interoperability is recognized as one of the most challenging aspects of NMD development.

The ability to hit a target reentry vehicle (RV) in a direct hit-to-kill collision was demonstrated in the first flight intercept in October 1999. However, in that test, operationally representative sensors did not provide initial interceptor targeting instructions, as would be the case in an operational system. Instead, for test purposes, a Global Positioning System (GPS) signal from the target RV served to first aim the interceptor. We were not able to repeat such a successful intercept in the next two flight intercept tests due to failures of systems we would have liked to have been able to take for granted, i.e. failure of a cooling system in the second flight intercept test, and failure of rocket stage separation and of the decoy to deploy in the third test. The fourth test, conducted just last Saturday, also achieved a hit-to-kill and was essentially a successful repeat of the two previous tests that did not go as well. Like the previous two tests, this latest test was an early test with necessary test limitations. Notwithstanding the limitations in the testing program and failures of important components in all of the first four flight intercept tests, the program has demonstrated considerable progress.

TESTING LIMITATIONS

In these early tests, the engagement conditions are different from an operational situation. The target, launched from Vandenberg AFB in California, is seen immediately by the early warning radar also in California, so early warning is not an issue. These early tests all have used a single large balloon as a decoy; more realistic tests later will use more representational decoys. The prototype X-band radar at Kwajalein is not forward-based in relation to the interceptor as it would be in many operational scenarios. As a result, either a C-band radar beacon or GPS has been used in the tests so far to provide target track information. These and other limitations will need to be phased out as the NMD program moves forward.

TEST RECOMMENDATIONS

In the correspondence with the Ballistic Missile Defense Organization (BMDO), my former office has made over 50 recommendations to enhance the NMD testing program. These recommendations also were stated in my August 11, 2000, deployment readiness review (DRR) report, my testimony last September before the House Committee on Government Reform and Oversight, and in my Fiscal Year 2000 Annual Report. These recommendations include more realistic flight engagements, tests with simple countermeasures beyond those planned, tests with simple tumbling RVs, and tests with multiple simultaneous engagements. BMDO is now implementing many of those recommendations. For example, I recommended that the program develop more realistic engagement geometries either with launches of interceptors or targets from the Kodiak Launch Complex in Kodiak, Alaska. BMDO has recently announced that they will be implementing this recommendation.

Because of the nature of strategic ballistic missile defense, it is impractical to conduct full, operationally realistic intercept flight-testing across the wide spectrum of possible scenarios. The program must therefore augment its flight-testing with various types of simulations. Overall, NMD testing is comprised of interrelated ground hardware and software-in-the-loop testing, intercept and non-intercept flight-testing, computer and laboratory simulations, and man-in-the-loop command and control exercises.

Unfortunately, all of these simulations have failed to develop as expected. This, coupled with flight test delays, has placed a significant limitation on the ability to assess the technological feasibility of NMD.

The testing program has been designed to learn as much as possible from each test. Accordingly, the tests so far have all been planned with backup systems so that if one portion of a test fails, the rest of the test objectives might still be met.

Developmental tests in a complex program, especially those conducted very early, contain many limitations and artificialities, some driven by the need for specific early design data and some driven by test range safety considerations. Also, the program was never structured to produce operationally realistic test results this early. Accordingly, it was not realistic to expect such early test results could have supported a full deployment decision in the Clinton administration, even if all of the tests had been unambiguously successful, which they were not. Similarly, the early test results to date, including the latest flight intercept test last Saturday, do not yet justify a Bush administration decision to deploy an operational system in Alaska. The Bush administration is proposing a very aggressive new testing program. Such a test program, with many activities conducted in parallel, will be necessary if deployment of even a primitive operational capability is expected this decade. For

example, four or five tests per year of the Mid-course Defense Segment could complete in 4 or 5 years, the twenty or so developmental tests needed before realistic operational testing could begin. This assumes that all twenty tests are successful and that no tests need to be repeated because of set-backs, surprises, or failures.

In a way, the NMD program has been set back during the last 6 months. While the Bush administration has not yet said exactly what its system—or system-of-systems will be, in policy statements the administration has emphasized layered defenses with new emphasis on boost- and terminal-phase defenses. However, the Mid-course Defense Segment of the Clinton administration is the farthest along technically, and will be a necessary part of any layered system. Also, the Bush administration has emphasized mobile land-based, sea-based, airborne, and space-based approaches to these segments, whereas the Clinton administration was focused on a fixed, land-based midcourse system. This array of options, and the declared intention also to defend our friends and allies around the world, has produced confusion about what we will actually try to build since all of these options are probably not affordable.

In addition, during the last 6 months, NMD fell another 6 months further behind in its planned testing. Three tests of the new two-stage booster which were to all have taken place by now have slipped about 6 months, with the first of these now scheduled for next month. Also the fourth flight-intercept test, so-called IFT-6, just conducted, was to have taken place many months ago. Since my testimony before the House last September, the latest flight-intercept test had slipped 6 months, as have the three booster vehicle tests. This tendency for NMD tests to suffer significant delays, which has been a characteristic of the NMD program for several years now, will need to change if satisfactory overall progress is to be realized.

OPERATIONAL CONSIDERATIONS

Each of the approaches to NMD has its strengths and weaknesses. Midcourse NMD provides national coverage in a relatively cost-effective way, but has been lambasted by scientists for its inability to discriminate decoys and countermeasures. Boost-phase NMD avoids the problem with countermeasures and decoys, but requires the interceptors to be very close to enemy territory and confronts the operators with breathtakingly short reaction times. The sensing radars and satellites must begin to discriminate and characterize the enemy missiles within seconds, and intercept must occur within 3 or 4 minutes, possibly within 120 seconds in some scenarios. A boost-phase system must be essentially computer operated and autonomous, with no time for consultation with the President, the National Security Advisor or the Secretary of Defense. Also, boost-phase systems can be vulnerable to certain countermeasures and tactics as well. Terminal-phase systems have the advantage of atmospheric stripping, that is, using the atmosphere to strip out lighter objects, decoys and chaff that are designed to conceal the desired target. However, the effects of the atmosphere on decoys are observable only during the last 60 to 90 seconds of flight, and once again there are countermeasures an enemy could use.

Taken together in a layered system, all these segments could be better than any one segment alone, provided that they worked together and that failures in one part of a layered system didn't lead to failures in another. The more complicated the overall system, the greater the cost and the demands on reliability and availability.

In general, NMD systems must achieve reliability, availability and effectiveness levels that are rarely if ever achieved by military systems, and when parsed out to the various components and subsystems, the required reliability of those components and subsystems becomes exceedingly high.

For the sake of comparison, in Iraq and in Kosovo, the enemy air defense systems have had zero effectiveness against U.S. aircraft. Using a combination of stealth, jamming and tactics, we have prevented these enemy air defense systems from having any real capability against U.S. targets. While conventional air defense is not the same thing as missile defense, the comparison does illustrate the challenge.

Midcourse NMD is analogous to a golfer trying to hit a hole in one when the hole is going 15,000 miles per hour. With decoys, midcourse NMD is analogous to trying to hit a hole in one when the hole is going 15,000 miles per hour, and the green is covered with flags and other holes that look similar to the real hole.

Boost-phase NMD is analogous to trying to hit your golf partner's drive out of the air with a drive of your own. Your reactions must be quick, and your drive has to be very fast to catch up.

In terminal-phase NMD, your golf perspective flips and is analogous to being the hole. But now you are trying to prevent another golfer's drive from landing anywhere on the green, where the green is as big as the United States.

Such analogies may seem exaggerated, but they really aren't. For example, to take just one component of both boost-phase and midcourse systems, it is difficult for us to visualize how the infrared seeker on the kill vehicle "sees." With human sight and human brains we may get clues about which is the real target, clues the kill vehicle doesn't get. On the kill vehicle, the IR seeker sees in only one color—you could think of it as a particular shade of red—and it sees through a narrow field of view, like a soda straw. Sometime try telling what's going on by watching black and white television through a soda straw with one eye closed and without sound. Then you'll begin to see how difficult discrimination is for NMD seeker systems.

FUTURE TEST PLANNING

Recently, the Ballistic Missile Defense Organization has said that the focus of the NMD program is going to be on testing, not deployment, a development I applaud. This new emphasis could help correct what has been a chronic problem, namely, that test results were not likely to be available soon enough to support a recommendation for early deployment anyway. This is because the planned testing program continues to run behind schedule, because the test content has not yet addressed important operational questions, and because ground-test facilities for assessment and training are considerably behind schedule.

NMD developmental testing needs to be augmented to provide for realistic operational situations in the IOT&E phase, and will need to be very aggressive to keep pace with the recently proposed plans to achieve early operational capability with test assets in Alaska. The testing schedule, including supporting modeling and simulation, continues to slip while plans for deployment have not. Important parts of the test program have slipped a year and a half in the two and a half years since the NMD program was restructured in January 1999. Thus, the program is behind in both the demonstrated level of technical accomplishment and in schedule. Additionally, the content of individual tests has been diminished and is providing less information than originally planned.

While in the Pentagon, I expressed concern that the NMD program had not planned nor funded any intercept tests until IOT&E with realistic operational features such as multiple simultaneous engagements, long-range intercepts, realistic engagement geometries, and countermeasures other than simple balloons. I am pleased that BMDO has accepted many of my recommendations and is changing the flight-test matrix to include such tests. While it may not be practical or affordable to do all these things in developmental testing, selected stressing operational requirements should be included in developmental tests that precede IOT&E to help ensure sufficient capability for deployment. For example, the current C-band transponder tracking and identification system, justified by gaps in radar coverage and range safety considerations, is being used to provide target track information to the system in current tests. This practice should be phased out prior to IOT&E. This will ensure that the end-to-end system will support early target tracking and interceptor launch.

There is nothing wrong with the limited testing program the Department has been pursuing so long as the achieved results match the desired pace of acquisition decisions to support deployment. However, a more aggressive testing program, with parallel paths and activities, will be necessary to achieve an effective operational capability by fiscal year 2005 or even for several years thereafter. This means a test program that is structured to anticipate and absorb setbacks that inevitably occur. I am pleased that the NMD program is developing test plans that move in this direction. However, the Test and Evaluation Master Plan (TEMP) is obsolete, and much work must be done just to develop detailed test plans and a TEMP which covers the administration's newest RDT&E program for NMD. As these test plans are developed, continued interaction with the Operational Test and Evaluation organizations will be essential. I recommend that this Committee follow these developments closely, and encourage BMDO and the NMDO Program Offices to improve the frequency and candor of their interactions with these operational test experts.

The time and resource demands that would be required for a program of this type would be substantial. As documented in the Congressional Budget Office (CBO) report on the budgetary and technical implications of the NMD program,¹ the Safeguard missile program conducted 165 flight tests. The Safeguard program was an early version of NMD. Similarly, the Polaris program conducted 125 flight tests, and the Minuteman program conducted 101 flight tests. It is apparent from these test

¹ CBO Papers, *Budgetary and Technical Implications of the administration's Plan for National Missile Defense*, April 2000.

schedules that an extensive amount of work was done in parallel from one flight test to another. Failures that occurred were accepted, and the programs moved forward with parallel activities as flight-testing continued.

Rocket science has progressed in the past 35 years, and I am not suggesting that a hundred or more NMD flight tests will be necessary for each segment of a layered NMD defense. However, I would expect that each segment—boost-phase, midcourse, and terminal—could each require 25 or 30 tests, bringing the total for the full system to over 100 tests. Also, the technology in the current NMD program is more sophisticated than in those early missile programs, and we should be prepared for inevitable setbacks.

As in any weapons development program, the NMD acquisition and construction schedules need to be linked to capability achievements demonstrated in a robust test program, not to schedule per se. This approach can support an aggressive acquisition schedule if the test program has the capacity to deal with setbacks. On three separate occasions, independent panels chaired by Larry Welch (General, USAF Retired) have recommended an event-driven, not schedule-driven, program. In the long run, an event-driven program will take less time and cost less money than a program that must regularly be re-baselined due to the realities of very challenging technical and operational goals.

Aggressive flight-testing, coupled with comprehensive hardware-in-the-loop and simulation programs, will be essential for NMD. Additionally, the program will have to adopt a parallel test approach that can absorb occasionally disappointing test results that do not achieve their objectives in order to have any chance of achieving a deployment of operationally effective systems this decade. As noted by CBO, the Navy's Polaris program successfully took such an approach 30 years ago.

Deployment means the fielding of an operational system with some military utility that is effective under realistic combat conditions, against realistic threats and countermeasures, possibly without adequate prior knowledge of the target cluster composition, timing, trajectory or direction, and when operated by military personnel at all times of the day or night and in all weather. Such a capability is yet to be shown to be practicable for NMD. These operational considerations will become an increasingly important part of test and simulation plans over the coming years.

My work in the DOD, and more than 30 years experience at Lawrence Livermore National Laboratory, has given me a perspective I'd like to share with the committee on the ABM Treaty, the role of deterrence, and the nature of the current threat.

NMD AND THE ABM TREATY

Currently, the Anti-Ballistic Missile (ABM) Treaty restricts conduct of flight-testing to the declared test ranges of Kwajalein Missile Range and White Sands Missile Range. In particular, with targets launched from Vandenberg toward Kwajalein, the targets are moving away from the early warning radar at Beale AFB, near Sacramento. In this geometry, early warning is not realistically tested. However, under the ABM Treaty, this can be relatively easily remedied by the declaration of other ranges as test ranges. Recently, BMDO has announced a plan to develop new test facilities in Kodiak and at Fort Greely, Alaska. This will support alternative Ground-Based Interceptor launches from more operationally representative locations. These additional launch sites would expand the test envelope beyond that currently available, as recommended by my former office and the Welch panel, to validate system simulations over a broader range of the operating regimes.

The treaty also currently precludes use of a surrogate radar in the NMD mode to skin track the incoming target RV during testing and to support creation of the Weapon Task Plan that first aims the interceptor. This necessitates the use of a non-operationally realistic beacon transponder or GPS on the RV for midcourse tracking during intercept testing.

Since additional test ranges can be established under the ABM Treaty, the treaty is not now an obstacle to proper development and testing of a National Missile Defense system. Development of an effective NMD network, even one with only a limited capability to intercept and destroy long-range missiles, will take a decade or more. This is for simple technical and budgetary reasons. In the near-term, the ABM Treaty hinders neither development nor testing.

Development and testing of fixed-site, midcourse missile defense is permitted under the ABM Treaty. The Pentagon, in fact, has been developing and testing technologies necessary for such a system for at least a decade in compliance with the treaty. Most flight-testing is done at the Army's Kwajalein Missile Range in the Pacific Ocean, a test site that is specifically permitted under the ABM Treaty.

Eventually, intercepts will be attempted at greater distances from Kwajalein to demonstrate more realistic engagements, but this also will be permissible under the

ABM Treaty. More importantly, a midcourse missile defense system will need to demonstrate that it can discriminate decoys, countermeasures, and rocket debris from the real target, the re-entry vehicle. This will take many tests paced by time, money and other resources, again not by the ABM Treaty.

At the point where the program is ready to move from developmental work to true operational testing, more realistic tests of NMD—using real soldiers and mimicking battlefield or attack conditions—would be required, and these tests likely would require modifications to the ABM Treaty. But there is plenty of time to consider this, as such real-world testing is many years away.

What about boost-phase missile defense? While the ABM Treaty prohibits the development and testing of mobile NMD systems, there is plenty of work on boost-phase systems that not only could be, but also, in any case, must be, done before running afoul of the treaty.

Boost-phase interceptors could be launched from Navy ships or from land. Either way the interceptors must be close enough to the enemy launch site that the interceptors can catch up before the enemy missile has traveled too far and deployed its payload. The process of detection and classification of an incoming missile must begin within seconds of its launch, and intercept must occur within only a few minutes. Consequently, a boost-phase system would need to be essentially autonomous, commanded by computers.

Naturally, any administration would want extensive testing of such a system to ensure the reliability and accuracy of the command and control computer network. But, again, the ABM Treaty would not be an obstacle. Testing can be done at various U.S. testing centers, including Kwajalein and the White Sands Missile Range in New Mexico.

Boost-phase systems, whether on land or aboard ship, would also require very fast rockets and high acceleration maneuvering—more so than midcourse systems. Such new rockets would take years to develop and test. The interceptor rocket for midcourse NMD has been under development and testing for many years, and within accepted interpretations of the ABM Treaty. Similarly, still-faster rockets for a boost-phase NMD could be tested in the same way.

With respect to the Airborne Laser and the Space Based Laser, each has its own special challenges that have little to do with the ABM Treaty. In the case of the Airborne Laser, there are important operational considerations. A Boeing 747 aircraft loaded with heavy laser apparatus, and flying close to an enemy, makes an inviting target. To permit the 747 to stand back from the forward edge of battle, the airborne laser needs very high power to damage its targets through the atmosphere. Development of such lasers is ongoing at contractor and government test facilities in full compliance with the ABM Treaty.

As for the Space Based Laser, the current prototype is too heavy to be launched into space by existing U.S. boosters. Perhaps it can be made lighter and more powerful, but this will take time—at least a dozen years. The ABM Treaty is not currently an issue here.

Perhaps the greatest challenge for NMD right now is building realistic simulators to model how all the elements of a system, from launcher to interceptor to radar to command and control networks, might work together. As I noted, the NMD program is years behind in this arena, but not because of the ABM Treaty. The problem is a technological one.

The United States faces a very complex and difficult set of expensive NMD development problems—problems that abrogating the ABM Treaty will not overcome. Rather than focusing on the red herring of the ABM Treaty, the NMD program would do better to concentrate on crafting long-term, affordable approaches to technology development.

NMD AND DETERRENCE

Unfortunately, to justify the possible near-term abrogation of the ABM Treaty, the Bush administration has been talking down the value of traditional nuclear deterrence. This simply is not necessary in making a case for development of NMD, and is potentially harmful to global strategic stability.

In talking down deterrence, the administration has suggested that nuclear deterrence is obsolete and that the United States wouldn't drop a nuclear bomb on, say, Pyongyang, even if North Korea attacked the U.S. homeland with weapons of mass destruction first. The administration also has coupled plans for reducing the U.S. nuclear stockpile with an increased effort on National Missile Defense.

The administration is saying, in effect, that as we reduce our nuclear stockpile, we become more vulnerable and thus must have NMD. The general idea is that our

nuclear deterrent stockpile will become too small to be effective, and we won't have the resolve to use it anyway, so NMD can fill the gap.

Maintaining a credible nuclear deterrent takes steady determination. Adversaries must believe that U.S. nuclear weapons work, and that U.S. leaders have the will to use them if so attacked. This explains why it is so difficult for nuclear powers to adopt a no first use policy. While no nuclear power has the intention of striking first with nuclear weapons, saying so officially begs questions about the resolve necessary to maintain deterrence.

The Bush administration, on the other hand, is flipping traditional deterrence theory upside down. Administration officials are saying that U.S. nuclear deterrence policy is to turn the other cheek. They are acknowledging a lack of resolve to use nuclear weapons no matter what, and are suggesting instead that the answer is to absorb enemy missile attacks with NMD.

The trouble with this approach is that it leaves us empty-handed. Pentagon briefings for National Missile Defense show a flawless Plexiglas dome covering the United States. We imagine that incoming enemy missiles would bounce off it like hail off a windshield. Unfortunately, such a missile shield—even under the Bush administration concept for a layered system—is a practical impossibility.

Recognizing this technical problem, Defense Secretary Donald Rumsfeld has noted that missile defense doesn't have to be perfect, and that if it worked only part of the time it would still be worth it. This makes little sense. It is hard to believe that an adversary who is not afraid of nuclear retaliation would refrain from shooting missiles at the United States simply because of a missile shield that only works part time. It is also hard to believe that any U.S. president would be comfortable in taking action that might provoke a missile attack knowing that one or more of the weapons might well hit its target.

Giving up deterrence for an unpredictable defense leaves the United States holding the bag. As former Secretary of State George Shultz put it in the days of President Ronald Reagan's Strategic Defense Initiative, such propositions for intercontinental missile defense are nothing more than the sleeves in our vest. If we give up deterrence for nothing, we invite conflict around the globe, and encourage rather than deter first use of nuclear weapons by rogue nations.

In addition to inviting U.S. enemies to test our resolve, the rejection of deterrence policy in favor of national missile defense places U.S. arms control proponents in a devilish dilemma. On the one hand, they would like to eliminate nuclear weapons entirely, and nuclear deterrence too. On the other hand, they see missile defense as dangerously destabilizing, and sure to cause Russia, China and other nations to build up their own nuclear stockpiles simply to beat our missile defense.

Also, pursuit of national missile defense threatens the very sensible proposal by many serious scholars of global security to take nuclear weapons off hair-trigger alert. Why would Russia or China agree to take their nuclear weapons off alert if they thought that quick surprise was the best counter to a U.S. attempt at missile defense?

The danger with talking down deterrence is that some may listen and change their behavior accordingly.

As Secretary Rumsfeld put it at the Munich Conference on European Security Policy last February, "We know from history that weakness is provocative. That it entices people into adventures they would otherwise avoid." With those words, the Secretary was trying to justify national missile defense. But those words also justify a believable nuclear deterrent.

THEATER MISSILE DEFENSE AND THE REAL AND PRESENT THREAT

Amidst all the political and technical turmoil surrounding NMD, the U.S. military today faces a real enemy threat that, for the past 10 years, we unfortunately have failed to seriously address. Not something hypothetical that could possibly arise in the future, but a real danger to our military forces and capabilities that we have already experienced and have failed to handle. That danger is attack against U.S. troops overseas from short-range ballistic missiles.

A few months ago we observed the tenth anniversary of the first lethal Scud attack against U.S. troops. In that attack, 28 U.S. soldiers were killed and more than 100 were wounded. Yet, today, a decade after the Persian Gulf War, American troops overseas remain in serious peril from short-range ballistic missiles. The United States has soldiers stationed in the Persian Gulf or in Korea who are potential targets of enemy short-range missile attacks.

It is unusual for the United States to be so far behind a real military danger. Our military is sometimes accused of "fighting the last war," of not preparing for the future. Scuds, unfortunately, are a threat from the last war we still need to fight.

In fact, both the Army and the Navy have tactical missile defense development programs that are making progress toward dealing with this vulnerability. These systems are called "area" or "lower tier" for countering short-range attacks, and "theater" or "upper tier" defense systems for intermediate-range attacks. These promising short- to intermediate-range systems are technically and politically distinct from NMD, which is intended to defend against missiles of intercontinental range.

However, the debate about National Missile Defense has drowned out the most urgent missile defense need, namely, defending our troops on the battlefield. The debate also has affected priorities inside the Pentagon. As currently scheduled, realistic operational tests of our short-range missile defense systems won't take place for many years. The theater defense systems have field deployment schedules after the deployment dates now being proposed for NMD, even though the theater missile threat is much more imminent.

Whether we can successfully develop NMD technology is debatable. By contrast, the technology needed for area and theater missile defense is much more straightforward, and the lessons learned from working on shorter-range defenses could usefully be applied to an NMD network. Nevertheless, at the current pace, we are still years away from realistic operational demonstrations of area and theater missile defense systems, and the complex command and control, interoperability, and reliability standards they must achieve to be effective.

As I noted, the administration has begun to describe missile defense in new ways, and administration officials have emphasized the importance of defending our friends and allies. Equally important, however, is defending our own troops overseas, something about which we have heard little.

The area and theater missile defense systems have been set back by the pressures to push NMD. The shorter-range systems could be further ahead today if they had not been delayed by the distractions and the budgetary priorities of NMD. Because shorter-range attacks are the real threats our troops overseas face every day, shorter-range defensive systems should be getting more urgent priority.

I would recommend that this Committee in exercising its oversight over NMD, consider as well the question of TMD as a separate issue, and one deserving of more attention.

The Pentagon's recent decision in PBD 816 to transfer the Army and Navy area and theater missile defense systems out of BMDO and back to the Army and Navy is a positive step. Assuming the area and theater defense programs are adequately funded, this will enable the services to move forward on area and theater missile defense undistracted by NMD issues.

CONCLUSION

The technical and political challenges for NMD are such that careful oversight will be required by this Committee for many years—probably decades—to come. To demonstrate an effective operational capability, the Service Test Organizations, who working together jointly on NMD, provide an essential operational perspective. This operational perspective is vital for any military system, but particularly so for NMD because of its complexity. Working with the Director, Operational Test and Evaluation in OSD, the Service Operational Test Agencies provide valuable insights to the NMD Program Office, to Service and OSD leadership, and to Congress. The early involvement of the operational test community can help avoid setbacks and delays, and help solve problems early that will be much more difficult and expensive to fix later. The early involvement of the operational test community will be key to NMD systems that really work in realistic combat environments. I am confident that the future and ultimate success of NMD will depend on the OT&E community. It is through the operational test community that you will know whether theater missile defenses can reliably protect our sons and daughters serving in the military overseas. It is through the operational test community that you will know what kind of protection an NMD system can provide against unauthorized or accidental ICBM launches from Russia or China as well as intentional launches from states of concern. It is through the operational test community that NMD—and TMD as well—has its best chance for success. Throughout, the DOD operational test community will require the encouragement and the steadfast support of this committee and Congress. I urge this committee and Congress to require the assessments of the operational test agencies in congressional reviews of the progress of NMD.

Mr. Chairman, I would be pleased to answer any questions you or the members of the committee may have.

Chairman LEVIN. Thank you very much, Mr. Coyle.

Mr. Perle.

STATEMENT OF HON. RICHARD N. PERLE, RESIDENT SCHOLAR, AMERICAN ENTERPRISE INSTITUTE, FORMER ASSISTANT SECRETARY OF DEFENSE FOR INTERNATIONAL SECURITY POLICY

Mr. PERLE. Thank you very much, Mr. Chairman, for including me in these hearings. In complex issues of this sort, there is no substitute for thorough discussion, and you and your colleagues have done well to devote time and serious attention to this issue.

The issue before you is one that I have followed since the spring of 1969, when I came to Washington to work for Senator Henry "Scoop" Jackson. I had met Scoop in the course of assessing the debate over missile defense for a small committee headed by Dean Acheson, Karl Nitze, and Albert Wohlstetter. These three distinguished Americans believed that it was dangerous for the United States to remain vulnerable to a missile attack, and they formed a committee to develop the argument for ballistic missile defense.

At the time, we were deep in the Cold War. Suspicion, hostility, and fear dominated the relationship between the United States and the Soviet Union. We observed the heavy-mechanized Warsaw Pact divisions arrayed along the Iron Curtain and devised the means to deter them. Outnumbered in Europe, we relied on nuclear weapons to achieve a military balance.

The situation then required us to calculate the nuclear balance between the United States and the Soviet Union to a degree of arithmetic precision that included the provision—I had one as a young staffer—of a calculator that permitted you to estimate how much of our nuclear deterrent would survive in the face of a massive Soviet attack, depending on the accuracy of their weapons and whether they were air or ground-based and the like. We spent our time doing those calculations.

We were forced to consider whether enough of our nuclear deterrent would be able to survive a massive Soviet strike, and retaliate with force sufficient to deter, and since many of these scenarios that preoccupied our military planners began with a nonnuclear war in the center of Europe, the control of escalation was fundamental to our strategy.

In those circumstances, the argument was made first by American strategists and scientists and eventually by Soviet officials that the deployment of a missile defense by the United States would threaten the Soviet ability to destroy us in a retaliatory attack if we should launch a massive nuclear strike against them. Thus, it was argued, any American missile defense would inevitably be countered by a buildup of Soviet missiles and bombers. An effort to defend ourselves would simply stimulate an arms race as the Soviets sought to neutralize our defense by expanding their offense.

That was the core argument against missile defenses, and it was made in the context of a bitter, deadly cold war between two nuclear superpowers with fundamentally different philosophies and interests. I remember well the debate about the Safeguard Missile Defense System in 1969 and 1970. Much of it took place before this

very committee, and in 1970 the Senate, by a single vote, approved going forward with the Safeguard system.

Armed with the authority to begin building defenses, the Nixon administration, led by Henry Kissinger, negotiated a treaty with the Soviet Union essentially banning the deployment of missile defenses. Signed in 1972, the ABM Treaty, together with an interim agreement on offensive weapons, sought to freeze the growth of offensive missile forces and to fix the balance between offense and defense. The ABM Treaty marked the acceptance of the view that a legally binding arrangement was necessary to achieve stability in the nuclear balance between hostile powers.

Parenthetically, in the end, the Soviets found ways to significantly expand their nuclear force, with the result that the two agreements of 1972 largely failed to achieve their underlying intended purpose.

When the ABM Treaty was before the Senate, it was approved overwhelmingly. There was either one vote against it, or two. I know Senator Buckley from New York voted against it, and possibly Senator Hollings.

A number of Senators who had misgivings about whether the treaty would lock us into a set of constraints that might later prove unwise were reassured by a key provision in the treaty, the right of either side to withdraw 180 days after giving notice, and I call this to your attention, Mr. Chairman, because if we now find it impossible to exercise that right to withdraw, which was understood at the time the treaty was approved as essential flexibility to respond to historical change, it raises a question about whether any withdrawal provision offers any real protection when history changes.

At this point, Mr. Chairman, you might well ask, why is he boring us with this ancient history, and the answer is that much current thinking about missile defense, and especially about the ABM Treaty, is mired in ancient history, the history and the context of the Cold War, and one could not have found a better illustration of that than the arguments we just heard from Sandy Berger.

Today, the United States stands naked before its enemies, unable to intercept even a single ballistic missile aimed by accident or design at our territory. Many Americans are shocked to learn that this condition of abject vulnerability has been the freely chosen policy of the government of the United States, and is widely, if superficially, supported by many of our allies.

It is, Mr. Chairman, a legacy of the Cold War. Frozen in that Cold War like a fly in amber are those who oppose missile defense because it is inconsistent with the ABM Treaty, believing that our exposure to attack by ballistic missiles actually makes us safer. Therefore, they argue, the vulnerability that developed during the Cold War should continue to be a permanent feature of American policy, enshrined forever in the ABM Treaty, or some minor modification of it, operating on an autopilot set during the Cold War.

The opponents of missile defense argue that a technologically serious defense, even if limited, would precipitate an arms race because other nuclear powers, especially Russia, would build additional missiles to overwhelm any defense we might deploy. You heard that argument from Sandy Berger.

Perhaps this is why, according to talking points prepared for official U.S.-Russian meetings, American officials in the last administration sought to assure the Russians that even if the United States built a modest, ground-based defense, Russia would still be able to incinerate the United States after a massive American nuclear strike. It is hard to imagine a mind set more reflective of the Cold War than that, yet this is the logic that animates the idea that the ABM Treaty is the cornerstone of strategic stability.

The idea of the ABM Treaty as a cornerstone of stability is simply anachronistic and dangerous. How can a treaty that was the cornerstone of stability in 1972, at the height of the Cold War, still constitute a cornerstone in 2001, with the Cold War over and the Soviet Union dissolved? After all, there is almost nothing in common between the geopolitical situation in the middle of the Cold War and the situation we face today. That is why Henry Kissinger, who managed the negotiations that resulted in the ABM Treaty, has wisely and convincingly argued that it no longer serves American interests.

Far from assuring stability, the Cold War doctrine that we must seek safety through voluntary vulnerability is dangerously ill-conceived. Consider the core of the argument, that the Russians would build more nuclear weapons if we were to build a defense against ballistic missiles. Since we have no defense at all today, a nuclear force consisting of even one missile could do catastrophic harm to Los Angeles, Washington, or New York. A handful would mean destruction beyond imagination.

Now, suppose we were to deploy a defense capable of countering not one, or a handful, but a few hundred incoming warheads. With such a defense, we might no longer be vulnerable, as we are today, to such nuclear powers as, say, Britain, or France, each of which has offensive nuclear weapons.

Would the British feel compelled to build more nuclear weapons to overpower our defense, if our defense robbed them of their deterrent capability? Of course not. They do not regard the United States as an enemy. It is the political context, not the weapons themselves, that determines whether and to what extent any particular military capability is threatening, and whether agreements banning it are a source of stability.

Now that the Cold War is over, should Russia regard us as an enemy? We are more likely to send Mr. Putin a check than a massive barrage of missiles with nuclear warheads. We have sought in countless ways to work with, not against, the Russians. It is unimaginable that we would launch thousands of nuclear weapons against Russia and hope to benefit thereby, and that would be true even if we had a defense that would knock down every missile that might be launched in retaliation.

Would it make sense for Mr. Putin to respond to an American defense against North Korea or Saddam Hussein, or some unknown threat? Unless you believe history has stopped, it is simply a matter of time before a country hostile to the United States acquires a ballistic missile capable of reaching our territory and a warhead capable of inflicting mass destruction, and it almost does not matter exactly when or exactly who, because unless we are prepared to wait until that threat has already emerged, we have to

begin at some point to build a defense that we all understand will take a long time to achieve.

Would it make sense for Mr. Putin to respond to an American defense against North Korea or Saddam Hussein by building more missiles? Is the Russian economy such that a vast investment in new weapons aimed at the United States would benefit his country? It is sometimes said in response, and there was a glimmer of this argument in what Sandy had to say, that it is perceptions, not reality that counts. If the Russians or the Chinese perceive the United States as a threat, and, therefore, regard any antimissile system it may build as a danger to them, shouldn't the United States stand down?

This seems to me a particularly unwise line of argument. In psychiatry, it would lead to humoring paranoids, and Sandy referred to paranoia, by accepting their paranoia and acting to accommodate baseless fears. In science, it would mean the abandonment of rigor and discipline, pretending instead of proving, and in international politics, it would mean nurturing, rather than finding ways to correct false, dangerous, and even self-fulfilling ideas.

The Cold War is over, but we will not realize the full benefit of its passing until everyone involved behaves accordingly, abandoning the fears and apprehensions of half a century of conflict and the ideas about security that flowed from and were reflected in that long, dark conflict.

By clinging to the idea that the security of others is diminished if the United States is protected against missile attack, some Americans, and a number of European leaders, perhaps unwittingly, and certainly ironically, are perpetuating the anxiety of the Cold War. By arguing that the Russians or the Chinese or others are right to feel threatened by our defense, we are perpetuating the psychology of the Cold War.

Sandy Berger said, and I think I am quoting, for the Russians, U.S. coercion is not hard to conceive. I cannot imagine a less prudent argument to put in the mind of Mr. Putin, or, perhaps more to the point, in the minds of his critics and detractors, legitimizing the notion that Russia is right to fear an American missile defense because U.S. coercion is not hard to conceive.

We should be responding to those fears and those apprehensions by developing a new policy with Russia and by assuring the Russians in convincing ways that they need not fear coercion from the United States, rather than accepting the premise, and adjusting our self-defense capability to reflect that.

We should proceed to develop and employ defenses against the Saddam Husseins of this world, and we must explain, explain, and explain again to President Putin that such a defense does not diminish the security of his country, and we should be prepared to reduce sharply the size of our nuclear offensive forces both because the end of the Cold War enables us safely to do that, and because it will lend credibility to our new approach to Russia.

Mr. Chairman, some opponents of a robust missile defense, including, for example, French President Chirac, argue that such a defense would encourage the proliferation of nuclear weapons, and we heard some of that in Sandy Berger's testimony, too, yet the opposite is far more likely.

Imagine, if you will, the sharp rise in tension between India and Pakistan, both of which have nuclear weapons and ballistic missiles. Suppose the United States could dispatch an Aegis cruiser to the region with instructions to intercept any ballistic missile fired by either side. Such a capability in American hands would be highly stabilizing, reducing the likelihood of a conflict, discouraging the use of offensive missiles, and reassuring to both sides.

Other nations, like Iran, Iraq, and North Korea are actively trying to acquire missiles capable of attacking the United States. They believe that acquiring even a single missile will catapult them into a select class of states capable of inflicting massive damage on the United States.

They are well aware of Sandy Berger's suggestion that a truck with a bomb in it, or a ship with a bomb in it, could do great destruction, and yet they are investing massively, with only limited resources, not to acquire trucks, not to acquire ships in which they could assert a nuclear weapon, but to acquire ballistic missiles with ranges capable of reaching the United States. They have declared what they consider to be important. They have judged where they think their potential advantage to coerce and to attack may lie.

They believe that acquiring a single missile will catapult them into a select class of states capable of inflicting massive damage on the United States and, given time and money, a single missile or even several is not beyond their reach.

We can debate endlessly exactly when they emerge with it, but suppose that we were to construct a defense that could intercept all the warheads and decoys carried by 100 or 200 enemy missiles, that a Saddam Hussein or a Kim Jung Il would need that number to be confident that he could land a missile on New York, or Chicago, or an allied capital. In that case, even a determined adversary might well throw up his hands and conclude that such a missile force is beyond his reach.

By having no defense at all, we set the bar so low that it is an encouragement to the Saddam Husseins of the world. The hurdle they have to overcome is as small as it could possibly be, and our purpose should be to raise that barrier, to raise that hurdle.

The best way to protect against a missile attack is to discourage our adversaries from investing in the missiles in the first place, and there can be no more powerful disincentive than to have the shield that guarantees that their hugely expensive programs will fail. Based on our most advanced technology, it is that shield, not an outdated treaty, that will protect us best.

Sandy Berger put some emphasis on negotiating with Russia, and I infer from what he had in mind that he is thinking in terms of preserving, perhaps amending, but preserving the ABM Treaty. Mr. Chairman, I think we would be wise to put the ABM Treaty behind us, even if we had no plan or desire to build a ballistic missile defense, because as long as that treaty is regarded, as it is in some places today, as fundamental to the security of Russia and the United States, it continues the context of the Cold War. There is no other way to understand it.

Unless you take seriously the prospect of a massive American missile attack on Russia, or a massive Russian missile attack on the United States, the regulation of the offense-defense relation-

ship, which is what the ABM Treaty is all about, makes no sense, and when we say to the Russians we want to renegotiate the legal right we both enjoy to build defenses as well as offenses, we are saying to them that it is necessary to have such a structure in order to ensure that neither of us launches a nuclear attack on the other.

Until we break decisively with the history of the Cold War and the institutions that reflected that history, the Cold War will carry on. I think that is true of the relationship on offensive forces as well, which is why I believe we should reduce our forces unilaterally to the levels that we think appropriate, and without concern that doing so will make us vulnerable to an attack from Russia, because I do not believe there is evidence that we need be concerned about a massive nuclear attack from Russia. But there is a great deal of evidence that we need to be concerned about the Saddam Husseins of the world, those who are active today and those who will be active tomorrow, because it is simply a matter of time.

Let me conclude with one last point, and I read Phil Coyle's testimony, which has deterrence theory in it in addition to comment on testing, and he is obviously concerned that by building defenses we may appear to be abandoning or diminishing the importance of nuclear deterrence, of the threat to retaliate with nuclear weapons. The point I want to make is a moral one.

During the Cold War, none of us liked the fact that we based our security on the threat to destroy millions of people if we should come under attack, but we contented ourselves with that morally difficult policy by persuading ourselves that we had no choice, that defense was neither technically feasible nor practically feasible because it would precipitate the arms race that we have been talking about.

But today we have a choice. We no longer need to depend exclusively on the threat to use nuclear weapons in retaliation, nuclear weapons that might be aimed against us by a Saddam Hussein. If deterrence alone is to be the means by which we defend, it would require us in response to destroy women and children in Baghdad who would have no say in the decision by Saddam Hussein to launch a monstrous attack, or the attack from Saddam might be on another country, on a country friendly to the United States.

Can we justify holding hostage a hapless civilian population when we have the alternative of building a defense, and my answer to that is no. I hope the committee will consider that, in time, basing our security on the threat to destroy millions of civilians is not a tenable policy when we have alternatives.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Perle follows:]

PREPARED STATEMENT BY HON. RICHARD N. PERLE

Mr. Chairman, let me begin by thanking you for the invitation to appear before the committee today. The issue before you is one I have followed since the Spring of 1969 when I came to Washington to work for Scoop Jackson. I had met Scoop in the course of assessing the debate over missile defense for a small committee headed by Dean Acheson, Paul Nitze, and Albert Wohlstetter.

These three distinguished Americans believed that it was dangerous for the United States to remain vulnerable to a missile attack and they formed a committee to develop the argument for a ballistic missile defense.

At the time, we were deep in the Cold War. Suspicion, hostility and fear dominated the relationship between the United States and the Soviet Union. We observed the heavy mechanized Warsaw Pact divisions arrayed along the Iron Curtain and devised the means to deter them. Outnumbered in Europe, we relied on nuclear weapons to achieve a military balance.

The situation then required us to calculate the nuclear balance between the United States and the Soviet Union. We were forced to consider whether enough of our nuclear deterrent would be able to survive a massive Soviet strike and retaliate with force sufficient to deter. Since many of the scenarios that preoccupied our military planners began with a non-nuclear war in the center of Europe, the control of escalation was fundamental to our strategy.

In those circumstances, the argument was made first by American strategists and scientists and, eventually, by Soviet officials, that the deployment of a missile defense by the United States would threaten the Soviet ability to destroy us in a retaliatory attack if we should launch a massive nuclear strike against them. Thus, it was argued, any American missile defense would inevitably be countered by a build-up of Soviet missiles and bombers. An effort to defend ourselves would simply stimulate an arms race as the Soviets sought to neutralize our defense by expanding their offense. That was the core argument against missile defenses and it was made in the context of a bitter, deadly cold war between two nuclear powers with fundamentally different philosophies and interests.

I remember well the debate about the Safeguard missile defense system in 1969 and 1970. Much of it took place before this very Committee. In the end, in 1970, the Senate, by a single vote, approved going forward with the Safeguard defense system.

Armed with the authority to begin building defenses, the Nixon administration, led by Henry Kissinger, negotiated a treaty with the Soviet Union essentially banning the deployment of missile defenses. Signed in 1972, the ABM Treaty, together with an interim agreement on offensive weapons, sought to freeze the growth of offensive missile forces and to fix the balance between offense and defense.

The ABM Treaty marked acceptance of the view that a legally-binding arrangement was necessary to achieve stability in the nuclear balance between hostile powers. (In the end the Soviets found ways significantly to expand its offensive forces with the result that the two agreements of 1972 largely failed to achieve their intended purpose.)

When the ABM Treaty was before the Senate it was approved overwhelmingly. A number of Senators who has misgivings about whether the treaty would lock us in to a set of constraints that might later prove unwise were reassured by a key provision in the treaty: the right of either side to withdraw 180 days after giving notice.

At this point, Mr. Chairman, you might well ask: why is he boring us with this ancient history?

The answer is that much current thinking about missile defense—and especially about the ABM Treaty—is mired in ancient history, the history—and context—of the Cold War.

Today the United States stands naked before its enemies, unable to intercept even a single ballistic missile aimed, by accident or design, at our territory. Many Americans are shocked to learn that this condition of abject vulnerability has been the freely chosen policy of the government of the United States, and is widely—if superficially—supported by many of our allies. It is a legacy of the Cold War.

Frozen in the Cold War like a fly in amber, those who oppose missile defense because it is inconsistent with the ABM Treaty believe our exposure to attack by ballistic missiles actually makes us safer. Therefore, they argue, the vulnerability that developed during the Cold War should continue—a permanent feature of American policy, enshrined forever in the ABM Treaty or some minor modification of it.

Operating on an autopilot set during the Cold War, the opponents of a missile defense argue that a technologically serious defense, even if limited, would precipitate an arms race because other nuclear powers, especially Russia, would build additional missiles to overwhelm any defense we might deploy.

Perhaps this is why (according to talking points prepared for official U.S.-Russian meetings) American officials in the last administration sought to assure the Russians that even if the United States built a modest ground-based defense, Russia would still be able to incinerate the United States after a massive American nuclear strike. It is hard to imagine a mind-set more reflective of the Cold War than that. Yet this is the logic that animates the idea that the ABM is the “cornerstone” of strategic stability.

The idea of the ABM Treaty as a cornerstone of stability is simply anachronistic—and dangerous. How can a treaty that was the cornerstone of stability in 1972 still

constitute a cornerstone in the year 2001? After all, there is almost nothing in common between the geopolitical situation in the middle of the Cold War and the situation today. That is why Henry Kissinger, who managed the negotiations that resulted in the ABM Treaty, has argued wisely and convincingly that it no longer serves American interests.

Far from assuring "stability," the Cold War doctrine that we must seek safety through voluntary vulnerability is dangerously ill-conceived. Consider the core of the argument, that the Russians would build more nuclear weapons if we were to build a defense against ballistic missiles.

Since we have no defense, a nuclear force consisting of even one missile could do catastrophic harm to Los Angeles or Washington or New York. A handful would mean destruction beyond imagination. Now, suppose we were to deploy a defense capable of countering not one or a handful, but a few hundred incoming warheads. With such a defense, we might no longer be vulnerable—as we are today—to such nuclear powers as, say, Britain or France. Would the British feel compelled to build more nuclear weapons to overpower our defense? Of course not. They don't regard the United States as an enemy. It is the political context, not the weapons themselves, that determine whether, and to what extent, any particular military capability is threatening—and whether agreements banning it are a source of stability.

Now that the Cold War is over, should Russia regard us as an enemy? We are more likely to send Mr. Putin a check than a massive barrage of missiles with nuclear warheads. We have sought in countless ways to work with, not against, the Russians. It is unimaginable that we would launch thousands of nuclear weapons against Russia and hope to benefit thereby. That would be true even if we had a defense that would knock down every missile that might be launched in retaliation.

Would it make sense for Mr. Putin to respond to an American defense against North Korea or Saddam Hussein by building more missiles? Is the Russian economy such that a vast investment in new weapons, aimed at the United States, would benefit his country? It is sometimes said in response that it is perceptions, not reality, that counts. If the Russians or the Chinese perceive the United States as a threat and therefore regard any anti-missile system it may build as a danger, shouldn't the United States stand down?

This seems to me a particularly unwise line of argument. In psychiatry it would lead to humoring paranoids by accepting their paranoia and acting to accommodate baseless fears. In science, it would mean the abandonment of rigor and discipline, pretending instead of proving. In international politics, it would mean nurturing rather than finding ways to correct false and dangerous and even self-fulfilling ideas.

The Cold War is over; but we will not realize the full benefit of its passing until everyone involved behaves accordingly, abandoning the fears and apprehensions of half a century of conflict and the ideas about security that flowed from, and were reflected in, that long, dark conflict.

By clinging to the idea that the security of others is diminished if the United States is protected against missile attack, some Americans and a number of European leaders, perhaps unwittingly, and certainly ironically, are perpetuating the anxiety of the Cold War. That is a climate we must now transcend.

We should proceed to develop and deploy defenses against the Saddam Hussein's of this world and we must explain, explain and explain again to President Putin that such a defense does not diminish the security of his country. We should be prepared to reduce sharply the size of our nuclear offensive forces both because the end of the Cold War enables us safely to do that and because it will lend credibility to our new approach to Russia.

Mr. Chairman, some opponents of a robust missile defense, including President Chirac, argue that such a defense would encourage the proliferation of nuclear weapons.

Yet the opposite is far more likely. Imagine a sharp rise in tension between India and Pakistan. Both countries have nuclear weapons and ballistic missiles. Suppose the United States could dispatch an Aegis cruiser to the region with instructions to intercept any ballistic missile fired by either side. Such a capability in American hands would be highly stabilizing, reducing the likelihood of conflict, discouraging the use of offensive missiles, and reassuring to both sides.

Other nations, like Iran, Iraq, and North Korea, are actively trying to acquire missiles capable of attacking the United States. They believe that acquiring even a single missile will catapult them into a select class of states capable of inflicting massive damage on the United States. Given time and money, a single missile, or even several, is not beyond their reach. But suppose that we were to construct a defense that could intercept all the warheads and decoys carried by 100 or 200 enemy missiles. A Saddam Hussein or a Kim Jung Il would need that number to

be confident he could land a missile on New York or Chicago or an allied capital. In that case, even a determined adversary might well throw up his hands and conclude that such a missile force is beyond his reach.

The best way to protect against a missile attack is to discourage our adversaries from investing in the missiles in the first place. There can be no more powerful disincentive than to have a shield that guarantees their hugely expensive programs will fail. It is that shield, based on our most advanced technology—not an outdated treaty—that will protect us best.

Chairman LEVIN. Thank you.

We are now going to give the witnesses an opportunity to respond to each other. Mr. Perle, your testimony was not presented in advance, as the rules require. The other two witnesses did present their testimony in advance so that we had an opportunity to read them. You had an opportunity to read the other statements, so we are going to give each of you an opportunity to respond to the other's comments for a few minutes, and then begin our first round of questions.

Mr. Berger.

Mr. BERGER. Mr. Chairman, I would make a few observations, because I think I would really like to engage with this committee. First of all, I suspect we all might object to the proposition that something over 30 is, ipso facto, obsolete. That would include most of us.

But putting aside that comment, I find it, first of all, rather startling that Mr. Perle takes objection to my saying that the Russians could believe that our attempt, or could see our attempt, to build a system, the definition of which they do not know, with very little opportunity to engage, as an opportunity to gain unilateral advantage, and be concerned about the context of not that we are going to launch a nuclear strike against them, but what do we do in a crisis if we had that capability.

We have been toe-to-toe quite recently. I find it ironic that he would take objection to that, and say that is responsible and yet in a sense say to Saddam Hussein and Kim Jong Il and the rogue-state leaders that their threat of coercion against us will work. That is, we do not have the will to respond either preemptively or otherwise to a rogue state that threatens to wipe out an American city with a long-range nuclear weapon.

He is saying, essentially, do not believe that we will use these things for deterrence. He is saying our deterrence will not work, to Saddam Hussein. I think that is equally unwise. The fact of the matter is, I cannot believe any President, faced with the statement by Saddam Hussein or Kim Jong Il that he is threatening Los Angeles would not preemptively eliminate the source of that threat, and I think we should be very careful in saying that deterrence does not work against rogue states, because the very statement of that lowers our security.

Second of all, I think again what Mr. Perle has demonstrated is a single-minded view of our national security, and essentially said at the end let us just get rid of the treaty. That is the objective.

Well, to me the objective is, let us enhance our security, and it seems to me that while we do have a rogue-state missile threat, we need to deal with it. The first line of defense is deterrence. There may be desire for an insurance policy, a value in an insurance policy in the nature of a defensive system.

How we go about that matters, and if we say right now, as I hear the administration saying, and I certainly hear Mr. Perle saying, we are going to do that without regard to what you think, we are going to just abrogate the ABM Treaty, or as the administration says, we are going, in the next 6 months, to be at a point where we either are bumping up against the treaty, or abrogate it, I think we cannot ignore the potential that there will be consequences and that there will be consequences in a number of different respects.

The Russians, in that situation, not knowing, because we have not told them what the purpose and scope of this defensive system is, I think quite possibly will respond in various ways, including eroding the framework of arms control, which gives us verification, transparency, and predictability.

I believe if our allies see us proceeding in this way without regard to trying to reach some sort of a strategic framework, as the President has said, they will think that our objective is getting rid of treaties, not enhancing our security. I do not think they will support us, and under those circumstances I do not know how we deploy a system.

I think in general, if you look only at one dimension here, the answer is self-evident. I think we ought to try to figure out how we get this apple if we need it without upsetting the entire apple cart in the process of doing that.

I think you heard from Mr. Perle in perhaps slightly more pure form than you heard it from Deputy Secretary of Defense Wolfowitz what the objective is here, which is, the principal objective is, get rid of the treaty, and my judgment is, let us proceed here in a way that looks across the range of our interests and tries to maximize our security and not put us in a collision course with the world.

Chairman LEVIN. Thank you. Mr. Coyle, do you have any comments for a couple of moments before we begin our round of questioning?

Mr. COYLE. Just a brief one, Mr. Chairman. If I thought we knew how to build a national missile defense system that would work, in realistic operational situations, I would agree with Mr. Perle in his remarks about deterrence, but as I noted in the longer version of my statement, Pentagon briefings on national missile defense show a flawless plexiglass dome covering the United States. We imagine that incoming enemy missiles would bounce off it like hail off a windshield. Unfortunately, such a missile shield, even under the Bush administration concept for a layered system, is a practical impossibility.

Chairman LEVIN. Mr. Perle, do you have a couple of moments of rebuttal?

Mr. PERLE. Thank you, Mr. Chairman. I think Sandy Berger is right to observe that there have been some difficult situations with the Russians in the post-Cold War period. We have been toe-to-toe recently, he said. I do not believe that our nuclear arsenal had any bearing on the way in which those issues were dealt with. Whether we are talking about differences over Kosovo or differences about Chechnya or other differences, I simply do not believe that the nuclear arsenals of either nation are relevant to the way we conduct our relationship.

Sandy Berger says of my argument that our deterrent will not work with Saddam Hussein. He is saying to Saddam Hussein that our deterrence will not work. Sandy Berger is saying that you can count on Saddam to be deterred by our deterrent, and I frankly do not want to count on the rational judgment of a man who has used poison gas against his own people, who has murdered his own closest associates, and whose stability and rationality cannot be assumed, because when we discover that deterrence did not work it will be too late. This applies, as well, to an accident. After the accident, it will be too late.

I am sure that Mr. Coyle will tell us that there are no foolproof systems. There are no absolute systems. There is reason to be concerned about how safe nuclear arsenals are over the long term, particularly in the deteriorating circumstances of the former Soviet Union, so it seems to me simple prudence that you do not bet the life of an American city, you do not bet the lives of millions of Americans, on the theoretical confidence that you will deter a Saddam Hussein or a Kim Jong Il, or some other individual who may possess the means to attack us who we do not even know today. Unless you believe that for the foreseeable future there is no danger, it makes sense to begin the process of a prudent insurance.

Now, Sandy says if we just abrogate the treaty we cannot ignore the consequences, and I agree with that. Of course we cannot ignore the consequences. We also cannot ignore the consequences of continuing the treaty, of continuing the Cold War relationship, which is the context for that treaty, and he has suggested the Russians will respond, or may respond by eroding arms control.

I am not quite sure what that means. I think what he meant to say is, they may respond by holding on to more nuclear weapons than they would otherwise have, or that they might respond by building new nuclear weapons. I tried to address that issue in my testimony, and it is up to you to judge whether that would be a rational and sustainable decision by Mr. Putin, whether he would conclude that it is in Russia's best interest to invest further in nuclear weapons because we had deployed a defense against the Saddam Husseins of the world.

He said further, our allies will not support us. In the recent weeks of this debate, I have met with any number of allied officials, dozens, and I have been encouraged by the way in which, as they listen to the argument, as this committee is listening to the argument, they have come to adjust their view, which in some cases was, indeed, an expression of opposition, and it is much less opposition today, and if we continue this argument in a careful and deliberate and rational way, I am convinced most of our allies will support us, but we have to do what is best for our own security. We are not going to take a vote among our allies and have our policy determined by them.

Chairman LEVIN. Thank you. I think we can have a 10-minute round here. We have three witnesses, and I think that would work all right. I did not consult with my colleague on that, but let us try a 10-minute round of questions here.

Senator WARNER. I am just wondering about the schedules of our colleagues. I simply would like to have a 6-minute round.

Chairman LEVIN. We will do that. We will have 6-minute rounds.

Senator WARNER. We could perhaps go to a second round.

Chairman LEVIN. We will have a second round, if necessary.

Mr. Coyle, your written testimony says that development of an effective NMD network, even one with only a limited capability to intercept, will take a decade or more. This is for simple technical and budgetary reasons. In the near term, the ABM Treaty hinders neither development nor testing. Now, we have been given testimony that is somewhat different from that, which is that there are constraints.

Secretary Wolfowitz told us the following: that we designed a program to develop and deploy as soon as is appropriate. Developing a proper layered defense will take time. It requires a more aggressive exploration of key technologies, particularly those that have been constrained by the ABM Treaty, so the administration is arguing that the ABM Treaty constrains testing in the near term. You have indicated that it does not. I would like you to comment on that.

Also, have you read the three pages given to us by Secretary Wolfowitz, one page for each of the three possible technology testing, which could bump up or conflict with the ABM Treaty within months, and if you would comment particularly on the test bed situation, as to whether or not that is necessary, does it add something? If so, does that not conflict, in a few months, with the ABM Treaty, and then how does that then fit with your statement that in the near term the ABM Treaty hinders neither development nor testing?

Mr. COYLE. Perhaps I could give a general answer first and then go to the specifics. We have been testing for years, in full compliance with the ABM Treaty, national missile defenses, and there are many tests still to be done. For example, the tests that are being done so far, the intercepts occur very close to Kwajalein.

Obviously, you would want to do tests where the intercepts really were at mid-course, which they have not been so far, but that is something you can do under the ABM Treaty now, just like the tests we have already been doing.

Also, as many scientists have pointed out, you would want to do tests with different kinds of countermeasures, different kinds of decoys, but again that is something that you can do right now from Kwajalein or Vandenberg or Kodiak, if that turns out to be a new test site, as well.

Similarly, you would want to do tests at different ranges, different trajectories, but all of those things take time and money, and there is nothing about them that requires new freedoms from the ABM Treaty.

With respect to boost-phase missile defenses, it is true that the treaty prohibits mobile defenses, such as from a ship, but we already know that the Navy missiles that they have now are too slow for boost-phase defense. They need to be twice as fast, so those new rockets would have to be developed and tested, something we have to do now at Kwajalein, White Sands, or other places. We already know that the radars on those ships are not suitable for NMD-class engagements, so new radars have to be built. Again, that would take time and money. So that is again why I said what I said.

Chairman LEVIN. If you would just focus, because of time constraints, on the test results at Fort Greely now.

Mr. COYLE. With respect to Fort Greely, my understanding is the administration does not intend to launch from Fort Greely for test purposes because of nearby populations of caribou and the like, so the things you might do there are store missiles that you would launch from Kodiak. I suppose there is nothing wrong with that, but that is not much of a test purpose. You could just as well store them at Kodiak, and it might be safer than hauling them from the middle of a very large state like Alaska down to Kodiak.

Fort Greely is the place where the Army has had its cold-regions test center, and it gets miserably cold there in the winter. I suppose an argument could be made also that you could learn something about operating a potential operational site at Fort Greely by having equipment there, because things that work in the rest of the world do not work at Fort Greely.

But again, there are many things that need to be done first, long before we would get to those kinds of issues.

Chairman LEVIN. Mr. Perle, you have said whether or not the ABM constrains this testing or not, that we should withdraw from the ABM Treaty, is that accurate?

Mr. PERLE. Yes, Senator. Can I just say one thing on the testing?

Chairman LEVIN. If you do not mind, because of time constraints, do you then disagree with Mr. Kissinger's comment that unilateral American decisions should be a last resort?

Mr. PERLE. No. I think we should have and are having a dialogue with the Russians.

Chairman LEVIN. You do believe, then, that the most powerful country, as he puts it, should not adopt unilateralism until the possibilities of an agreement have been fully explored? Do you agree with that?

Mr. PERLE. Yes. I think as a general rule, that sounds—

Chairman LEVIN. No, as a specific rule here, relative to withdrawal from the ABM Treaty, do you agree that the most powerful country in the world should not adopt unilateralism until the possibilities of agreement have been fully explored? Do you agree to that statement relative to withdrawal from the ABM Treaty?

Mr. PERLE. No. Stated that way, I do not agree with it.

Chairman LEVIN. Mr. Berger, on the question of Shemya, which in the last budget we had put some money in for Shemya, if we had deployed that radar at Shemya, there would have been a clear violation of the ABM Treaty at some point.

The point has been made that we did that without a compliance review group deciding anything, we did other testing without a compliance review group telling us that a particular test would be in compliance, and in the case of Shemya, we actually put money in which, if obligated at a certain point, at least, along the construction curve would have violated the ABM Treaty. What is the difference between what this budget request is asking for, if any, and what we did in the last year of the Clinton administration relative to Shemya?

Mr. BERGER. I think the context is entirely different, Mr. Chairman. The context of last year's budget request, which did include money for Shemya which we did not actually spend, meant we

were embarked upon a testing program that was consistent with the treaty: we had a discrete, specific architecture for a treaty, we were engaged in negotiations with the Russians, and had amendments on the table, including amendments to START III, so that is one context.

In this context, the administration has told you that their intent is to bump up against the treaty in the next several months, that as someone said in the *New York Times* today, a senior administration official, we do not want to have formal restrictions on development testing and deployment, similar to what Mr. Perle has said, so the context is different.

You have an administration that is putting you on notice that their intent is, essentially, to bump up against this treaty in the next several months unless the Russians agree to some new strategic framework in that period of time, so I think the context here is entirely different between where we were a year ago, a testing program consistent with the treaty, in the context of an ongoing negotiation and specific architecture, and an administration which seems in my judgment to be heading toward the horizon for abrogation unless, in the next few months, we can replace 50 years of strategic policy with a new strategic framework. I do not think that is enough time.

I actually believe, if I could add one thing, Mr. Chairman, it may be possible to reach a deal with President Putin. I agree with Senator Warner. I do not think it is at all inconceivable that the Russians would agree to changes in the ABM system that would accommodate a more robust testing program, or that would in other ways accommodate some of what we want to do.

But I do not believe that in the absence of telling them what we intend to do, what the architecture is, with some people, Mr. Perle writing in the *Wall Street Journal* saying we should have a residual capacity against the Russians in a defensive system without knowing what the architecture is, and saying in February, March, we are basically going to be between a rock and a hard place, I just think we are not creating enough space here, and it is in that context that I say to Mr. Perle that I think the allies are going to be deeply troubled.

If they see us acting here in a prudent, responsible way, as the President has suggested, trying to move to a new strategic framework, I applaud them for that, but that is not going to happen overnight. I think over time it is conceivable they will come around.

If they see that our objective is abrogation, and that our testing regime is neither necessary, as Mr. Coyle said, in terms of aggressive pursuit of a range of technologies, and is designed in a sense to create this kind of confrontation and create this collision as soon as possible, I think we are going to be isolated in the world. I think that matters.

Chairman LEVIN. Thank you.

Senator Warner.

Senator WARNER. Mr. Chairman and witnesses, I think we have had another good day of hearing our witnesses come forth and share their views. I have certain agreements with each of you and certain disagreements, so I will start with my long-time friend, Mr. Perle.

I thoroughly benefitted by your historical references as to how this whole concept of the ABM Treaty evolved. You were here in this building, and I was across the river in that period of time, and we were young and vigorous in those days. We do respect the framework and the concept of our elders, and I think that the withdrawal clause was put in there for a purpose; to enable both sides to have essential flexibility in the face of change.

I think, Mr. Berger, you underestimate how much change has really taken place since May 1972, and ironically I was there, primarily for other purposes, but as a part of that delegation which took place in Moscow in May 1972. I remember it very well.

But let me start with how I disagree with each of our witnesses to some extent.

Mr. Perle, I am of the frame of mind that the ABM Treaty in a sense has outlived its justifications and foundations, but I also believe that you have to deal with Congress as the chief executive. As Congress moves toward a new framework of understandings with Russia given Congress as a partner, and that a number of our colleagues have strong views, contrary to those of the President, we should thoroughly explore first a two-step process:

Step 1, to see whether or not we can conceive of a series of amendments to the ABM Treaty which, in effect, would give us a new framework, almost in the nature of a substitute amendment which is a phrase we use frequently on the Senate floor. I think that that is within the realm of possibility of our President to negotiate the new framework and somehow leave some vestiges of the ABM Treaty in place. This would address the difficulty so many nations have understanding on the heels of the Comprehensive Test Ban Treaty why our country has not consistently gone ahead with the old framework.

So keep an open mind. Eventually I think our President can show Russia the advantages of having an entirely new framework, but I do believe amendments can accommodate the near-term objectives of our President as he devises essential new steps in an architecture which I strongly support. We will take it a step at a time. That is my view.

Mr. Berger, I think you have very carefully analyzed the relationships between the United States and the former Soviet Union, today Russia, but we cannot be unmindful of the fact that a lot of nations are hell-bent on trying to acquire one or more of these weapons for whatever purpose they wish.

We dwell on my good friend and former chairman's views about the threat of one single weapon in the suitcase, and we are expending enormous sums of money, primarily in intelligence, to intercept those types of threats, but we are not spending commensurate funds to give us the essential ability to stop one or two missiles fired against the United States.

We have seen here recently two events involving the finest-trained military people. In Russia, they lost their submarine. We all know that their finest go into the submarine force. No dollars are spared in terms of safety, training, and capability in modern submarines, and then we saw gross negligence by the commanding officer of a submarine in Hawaii, when that submarine surfaced and caused the loss of life of innocent people.

Mistakes happen in the military. Mistakes can happen with the aging forces in Russia today—its missile forces which they can no longer economically support in the numbers they have. Accidents happen with our military as well. So we have to prepare ourselves against that type of situation.

I hope, Mr. Berger, in the course of your remarks this morning you can allay any concerns I have in listening to you that you might advocate a preemptive nuclear first strike against these countries that threaten us with their ballistic missiles, as opposed to putting a defensive system in to interdict that missile. Preemptive strikes by a superpower like ours against a small nation of helpless people, I just hope you will correct that in the course of the morning, I will move on to another subject, which is directly related to this.

We wake up this morning, to hear Russian President Putin advocating that he wants to join NATO. Now, it may be just jocular rhetoric on his part as he goes off to meet with our President, but that is something that has been discussed from time to time in your administration and others. What is your assessment? I will lead off with you, Mr. Berger. What is your assessment of his comments this morning, because if he were to join NATO, it seems to me we could very quickly reach an accommodation with regard to missile defense, because it is in the common interests of Russia as well as the United States.

Mr. BERGER. I think that is a long way off in the future, at the very least.

Senator WARNER. I certainly would not advocate it at this point in time. I think it would be the demise of NATO.

Mr. BERGER. Let me say I certainly agree, and the Clinton administration was never accused of underestimating the change in Russia over the last 8 years. I certainly agree that there is a new Russia, new leadership, new democracy, but in fact it is in part because of their crumbling offense, the fact that they cannot put their subs out on deployment, they cannot deploy their strategic aircraft, that a defensive system that we do not define for them in a system without rules, is going to cause them concern.

I do not think that concern is a trump card. I do not think that we ask their permission. We certainly did not as we were proceeding with our system, but I do think that we have to look smartly at how they could respond to decrease what they already see, as they lose confidence in their deterrent and as they see an increasing vulnerability from their own economic—

Senator WARNER. Excuse me, under my time constraints, I would like to have Mr. Perle address that.

Mr. Berger raises the question which I think we have to respond to, the timetable that the Bush administration has put down to achieve a new framework is so unrealistic that it raises a credible inference that their subliminal intention is to just trash the treaty from the beginning. I think our testimony here from Mr. Wolfowitz went a long way to dispel any basis for that assertion, but nevertheless, you have spent many years in the negotiating field.

Go back to the Intermediate Nuclear Forces (INF) weapons in Europe. We took in the 1980s a very assertive stance, quickly told

them what we were going to do, and while our allies objected initially, eventually that unfolded successfully.

Mr. PERLE. Senator, I think this is unlike the issues, the arms control issues of the Cold War, where every detail was important, where we wanted to cross every T and dot every I, and the difference is, we are talking about a whole new conceptual relationship between the United States and Russia. It is not a question of the details, it is a question of the concept.

Sandy Berger wants to stick with the old concept. He does not like the idea of replacing 50 years of strategic policy in a few months' time, but that was 50 years of policy during the Cold War. The Cold War is over.

It is rather more akin to demobilization after a world war, and so I do not think we need protracted negotiations to say to the Russians, unless you can conceive of an American, a massive—and we are talking thousands of weapons, nuclear attack on Russia, you do not need to be concerned about the very limited defense we have in mind. I frankly find it hard to imagine how a Russian across the table could say we would be concerned about a defense against a modest number of ballistic missiles that might be aimed at you.

How could they justify that concern, and if they cannot, and I believe they cannot, then we should put this treaty behind us, and without regret. It served a useful purpose during the Cold War. It now prevents us from mounting a modest defense against a Saddam Hussein or against an accident.

On balance, and I think the chairman put the question exactly right at the outset, are we better off with the treaty, or are we safer with or without it? On balance, the threat of an accident or a rogue state is much greater than the likelihood of a nuclear war, deliberate, massive nuclear war between the United States and Russia.

Mr. BERGER. Mr. Chairman, can I add one comment to that?

Senator WARNER. I am going to defer to the chairman. I think we had best stick to our time.

Chairman LEVIN. Senator Lieberman.

Senator LIEBERMAN. Thanks, Mr. Chairman. Thanks to the three of you for excellent testimony this morning.

I want to pick up on a question Senator Warner raised, and it goes to the heart of the changing strategic relationship between Russia and the United States, which is in many ways the premise, or it is certainly the reassuring context that the administration and others who support development of a national missile defense put forward, which is that the Cold War is over. Russia and the United States are no longer enemies, therefore, why is Russia concerned about our development of a missile defense?

I must say in that regard that, although this is not the first time this has been discussed, I took President Putin's comment at the press conference—I believe it was in Moscow yesterday—about his own interest in altering the strategic framework and in having Russia be considered for membership in NATO as a significant statement, and it is one that I hope on which the administration will engage him.

I hope President Bush will pick President Putin up in their discussions in Europe this weekend, because if, in fact—and look,

NATO was created, as I understand its history, for two reasons. One, obviously, was in response to the Warsaw Pact, as the centerpiece of a Cold War confrontation. The other, which is so often ignored, but at which NATO has been extraordinarily historically successful, is to form an institution in which historic enmities within Europe could be reconciled.

I mean, after all, we were talking about, this is a post-Second World War institution in which previous enemies in the Second World War, Germany, France, Britain, came together and have formed an alliance over the years.

We have already begun to work with Russia, I think quite constructively, in the Balkans, so I do not think there should be any inherent reason not to commence with such discussions.

They have another salutary effect. There are qualifications for membership in NATO. Some of them go to military comparability and preparedness. Obviously, Russia is in a much better position than some of the other nations we have taken in to meet that standard, and the others go to proof of the vibrancy or reality of democracy, which is an important additional guarantee to the people of Russia, who have suffered for too long under communism.

So I hope we will engage President Putin on this. I think it is a great thing to happen now, as we begin to talk to him about missile defense and modifications, or even abandonment of the ABM Treaty, because what better way than to say, President Putin, history has changed, the Cold War is over, we are no longer enemies, so much so that we are prepared to begin a process which may lead to your admission in to NATO, where you will generally be our ally.

My question is this. Just very briefly, I have been saying at these hearings, and I think the National Missile Defense Act of 1999, which passed the Senate 97 to 3, committed the United States to a policy of developing a national missile defense against limited attack as soon as it is technologically feasible, so to me the question is not whether we are going to have a missile defense, but when.

I also think, in truth, that the adoption of that act put us on another course, which was to have a missile defense obviously at some point requires either the comprehensive modification or abandonment of the ABM Treaty. You cannot have both, and, therefore, I think the question about ABM is not whether it will be altered, but when and how, and those are the questions that I want to ask particularly Mr. Berger.

Mr. Perle, I was troubled in this regard to read a statement in the *New York Times* today from Condoleezza Rice, President Bush's National Security Advisor. The reporter said, first, the White House has no interest in detailed talks about permissible testing and deployments—this is on missile defense—and then, “this is not about lining in, lining out the ABM Treaty to try to get a little bit of flexibility to do this test or that test.”

I presume she is talking about a broader alteration, but if, in fact, we are going to violate the ABM Treaty soon, as I think Mr. Berger is saying this morning, modifications are necessary or we are going to have to totally withdraw and precipitate a crisis, so I would ask the two of you two questions, Mr. Berger and Mr. Perle.

First, listening to Mr. Coyle particularly, who thinks we are not in any danger in the near term of violating the ABM Treaty, speaking generally and simplistically, to the extent that the two of you understand the administration's program here, when do you think we are going to violate the ABM Treaty, which would require us to pull out? Second, perhaps covered in the last round, why not modify the ABM Treaty if, in fact, there is going to be a violation soon, rather than forcing what may be very difficult, which is a major reorganization of the geopolitical strategic architecture between Russia and the United States?

Mr. BERGER. Let me try to answer both of those questions as concisely as I can. I think what Mr. Coyle is saying is that we need not violate the ABM Treaty any time soon to have an aggressive program with respect to a range of technologies.

Now, as I see it, as I read what the administration is putting forward, they have said they are going to bump up against the treaty in several months, and there are three ways in which that could happen. One is they have said there is going to be a PAC-3 test sometime in February. Now, if that is tested against a strategic missile, that would be a violation.

Second of all, they said they are going to use Aegis radars. Depending on how that happens, that could raise a treaty issue on the test track. We have a right to additional test sites under the treaty when we notify the Russians of that. We do not have a right to do that inconsistent of the treaty. That is, if we are doing it as an operational base.

So they have raised a series of—they have designed a test plan that they have said will bump up against the treaty, and depending on at least how those three tests go, could cross the line. I think what Mr. Coyle is saying—and I do not want to speak for him—is we want to be very aggressive in going against a range of technologies without bumping up for the time being.

On the second question, why not modify, we tried. We designed an architecture which BMDO and the Pentagon said was the fastest, most mature, most affordable way to meet the threat before us, which was the rogue state threat against the United States, and as Mr. Coyle has said, we made a good deal of progress in moving toward that system.

At the same time, we went to the Russians with a specific architecture and specific modifications. In the last 3 weeks, Senator Lieberman, I have heard four different rationales. We should have a system to defend ourselves against the United States, against rogue-state threats. That is what we were doing.

Second, we should have a system that should protect us and the Europeans and our friends against long-range ballistic threats. That is a different system. I do not know whether the Europeans are volunteering to pay for their portion of that. I have not heard that yet.

Third, we should have a system that does all of that plus enables us to deal with an unauthorized or accidental launch from Russia. That is a different system. Unless we know which SS-18 is going to accidentally launch, that is a different footprint.

Others say we need a 360-degree system that can defend us against anything from anywhere.

We are going to the Russians at this point saying, we cannot tell you what we are going to do. We cannot really tell you why we are going to do it. We cannot really tell you what we are asking you to do in the way of modifications. Just let us out of this treaty and trust us.

I think that we have a better chance of doing what President Bush has said, which is negotiating a new strategic framework, if we give ourselves more room, and what Mr. Coyle is telling us is that we can do that without prejudice to the development of a range of technologies.

Mr. PERLE. Senator, the ABM Treaty says we cannot have a defense, and what it permits is insignificant. The question, it seems to me, before the country is do we want to continue to live with that prohibition? Do we want to try to open enough freedom to take the next step for the next few months, or do we want to deal with the fundamental underlying conceptual question of whether we are right to prohibit defenses on the theory that we are somehow going to be safer if those defenses are to be prohibited?

What I put before the committee is an admittedly radical proposal. It is to recognize the way in which the world has changed, and not cling to this anachronism, and we would be clinging to the anachronism if we tried to deal with these small details in a way that would buy us some time.

The whole idea of buying some time implies that this treaty is serving our interest, and therefore we should preserve it for as long as we can. I think it is no longer serving our interest. It is contrary to our interest, and the sooner we exercise the right that was agreed upon in 1972 that we can withdraw, the better, and it has the added benefit that it will put the U.S.-Russian relationship in a new and much healthier context than the one that produced that treaty and has led some people to cling to it.

It is significant that in Russia the proponents of the treaty are the opponents of real change in the relationship between the United States and Russia. I am going to Moscow on the weekend to participate in the discussion, as I did last year, and I can tell you that the reformers, the most ardent reformers in Russia are the people who are most anxious to be rid of the Cold War context, and they are not in the least concerned about abandoning the ABM Treaty.

Chairman LEVIN. Thank you, Senator Lieberman.

Senator Inhofe.

Senator INHOFE. Thank you, Mr. Chairman.

Mr. Berger, you are quoted, I guess in the *International Herald Tribune* on Friday, July 13, of this year, saying, "China does not have the capability to be a destabilizing force in Asia, nor is there much evidence that it intends to do so."

Right now, with some 209 M-11 missiles, with the building of the destroyers, the submarines, with the upgrading of their platforms, with the recent purchase that—the number has not been confirmed, but around 240 SU-27s and SU-30s, which are state-of-the-art, and are actually better and more sophisticated than our F-15s and F-16s, and their air power conservatively estimated to be 3 to 1 over Taiwan, do you not believe that that military buildup is a destabilizing force on Taiwan?

Mr. BERGER. I think the sentence before the one you read, Senator—I have not seen how that was edited by the *Herald Tribune*—said that after several, a period of declining military budgets, the Chinese have increased their defense budgets. They are modernizing. These are things we need to be concerned about and to watch carefully. That was the context.

Senator INHOFE. So they could be a destabilizing force?

Mr. BERGER. I think at this point, I do not see them having the capability to launch a successful attack against Vietnam or against Korea. I think Taiwan is a unique and very difficult set of problems, but my view is, we should be dealing with that in a very deliberate way.

Senator INHOFE. Back during the Clinton administration, when you had the position of National Security Advisor, we went through an event that I know you were involved in, where we were all a little bit embarrassed after our intelligence had said that it would be somewhere around 5 years before North Korea would have the multiple stage rocket capability—I actually have a letter dated August 24, 1998, that stated that—then on August 31, they fired a three-stage missile capable of reaching the United States of America.

It is also well-known that North Korea is selling—not just trading its technology but selling systems to Iraq and Iran. Can you sit here today and say that there are currently no weapons of mass destruction and ICBM threats to the United States from rogue nations today?

Mr. BERGER. I am troubled, very troubled by the Korean program, which is why, Senator, we did several things. We negotiated a missile test moratorium to stop their testing, number 1, in 1991. That moratorium holds still today. Number 2, we initiated discussions—

Senator INHOFE. Let me interrupt you on that, because your recommendation number 7 in your opening statement was, and I wrote it down here, “negotiate with North Korea to stop the missile threat.” You essentially did that, and it is my understanding that there is strong evidence of testing that is taking place since that agreement was made.

Mr. BERGER. I do not know. You have greater access at this point to classified information than I do, Senator. I am not aware of any long-range testing by the Koreans since that moratorium. I think that is something we would know about and read on the front page of the *New York Times*.

We also, at the very end of the Clinton administration, began a conversation with the North Koreans about stopping their exports to states in the Middle East and elsewhere, and about ending their program. We did not have enough time to satisfy ourselves that we could reach an agreement that would reach our standard in terms of verification and otherwise, but I think we have an obligation to see whether we can negotiate away the threat in a verifiable way.

Senator INHOFE. This is chewing up my time rapidly, so I think your statement is that you feel comfortable in negotiating with North Korea to stop the missile threat. You have enough confidence in them.

Mr. BERGER. I do not think that is the only thing: Trust, but verify.

Senator INHOFE. Mr. Perle, do you have any comments to make about either of those two things? First of all, can we sit here today and assume that there is no threat from a rogue nation today, in light of this trading of technology and systems with North Korea?

Mr. PERLE. No, I do not think we can make that assumption. There is a great deal we simply do not know, and we have to assume that we could be surprised.

Senator INHOFE. Do you totally trust the North Koreans to agree to stop their missile threat?

Mr. PERLE. I do not trust the North Koreans at all.

Senator INHOFE. On the missile, the ABM Treaty.

Mr. BERGER. I would say I agree with that statement.

Senator INHOFE. On the ABM Treaty of 1972, this was back when, as we have said before, the Soviet Union was our enemy. Is Russia our enemy today?

Mr. BERGER. Senator, I find it somewhat ironic to hear myself cast here as the defender of old things, since Mr. Perle spent most of the last 8 years saying we had an overly romantic view of Russia. The fact is, a lot has changed, and Russia is not our enemy. The Soviet Union does not exist. The Cold War does not exist. We promoted NATO in large measure—

Senator INHOFE. They are our ally.

Mr. BERGER. They are not our ally, but they are not our enemy, but that does not mean that they do not have a gigantic nuclear arsenal, and that they are still not a strategic dynamic, and there is still not danger and uncertainty.

Senator INHOFE. Just a yes or no, do you think it could be argued, logically, that—and we want a missile defense system that will protect us but also our allies, and also Russia—it could be to their benefit for us to have this?

Mr. BERGER. I argued that to President Putin face-to-face. I said to President Putin, I think you ought to make these changes because I think it is in Russia's interest to have this system proceed in the context of arms control and in the context of constraints, not unbounded by constraints.

Senator INHOFE. Mr. Berger, you said in your opening statement also that you agree with Henry Kissinger, and then you went on to talk about it. I would ask you also if you agree with another statement Henry Kissinger made.

Henry Kissinger, having been the architect of the 1972 ABM Treaty, felt at that time, and frankly I did not agree with him at that time, but many people did, that mutually assured destruction (MAD) was the right thing to do.

Since that time, that very architect has said he is very much opposed to its application today because of the changing world, the proliferation we have been talking about, and he said, "It is nuts to make a virtue out of our vulnerability." Do you agree with Henry Kissinger on that statement?

Mr. BERGER. First of all, Senator, I do not know anybody saying we should abandon deterrence with respect to Russia, unless someone is saying we should build this system as a system designed against the Russian arsenal. No one is saying we should walk away

from deterrence of mutual destruction. They are saying, do it at a lower level.

What I am saying, and I think Henry Kissinger and I disagree on a number of aspects of this, what he is saying is big nations like the United States do not preemptively withdraw from treaties without demonstrating to the world that they have tried to make the changes that are necessary.

Senator INHOFE. Mr. Chairman, I know my time is up. I have just one yes or no question for Mr. Coyle.

Mr. Coyle, you said, and I believe national missile defense is being developed without the urgency of a threat. Don't you believe that, with the buildup that we are seeing in China, and with the comments that were made back when the demonstrations were taking place off the Taiwan Strait, and the comment was made that America would rather defend Los Angeles than Taipei, and when their defense minister said war with America is inevitable, would you not throw that into a category of urgency of a threat?

Mr. COYLE. Senator, I find it hard to believe that North Korea would be so reckless as to attack—

Senator INHOFE. No, I am talking about China now. This is China.

Mr. COYLE. I would make the same comment. I find it hard to believe that China would try to attack the U.S. homeland tomorrow, whereas I can certainly imagine North Korea or China firing short-range missiles, and the sense of my testimony was I believe the short-range missile threat is much more urgent.

Senator INHOFE. Thank you, Mr. Chairman.

Chairman LEVIN. Thank you. Senator Reed.

Senator REED. Thank you, Mr. Chairman.

Mr. Perle, you premised a great deal of your testimony on the assertion, repeatedly, that the Cold War is over, and in a very obvious sense you are absolutely right, describing the conflict, the competition between the United States, the Soviet Union, China, and the Communist Bloc.

But the Cold War is also a shorthand for a strategic situation where two nations have antithetical interests, commercial and ideological. They both have weapons of mass destruction that inhibits their use of conventional forces, and at the time that you are talking about the demise of the Cold War, you are also talking about the inability of nations acquiring these weapons, in effect, creating at least the dynamics of a Cold War in the future, i.e., two nations with antagonistic interests and nuclear weapons.

In that sense, and I guess it goes back to the point that has been made by others, is there any way that we can step away from mutual assured destruction, ultimately, as a strategic concept?

Mr. PERLE. I think that ultimately we will, of course, reserve the right and the capability to respond with nuclear weapons under certain circumstances. I think the circumstances are becoming much narrower than they once were.

We always preserve the right to use nuclear weapons to deal with a conventional attack in the center of Europe, for example. I no longer think that that makes sense. I believe that at the end of the day the role of nuclear weapons will be solely as a last resort, a response if nuclear weapons are used against us, and in all

other contingencies we will have to find nonnuclear ways of protecting our interest and the interests of our allies.

Where I think the world is fundamentally different now is that we cannot be sure that there will not be a missile fired by accident. We could not be sure before, but we did not have a ready response, and second there are countries and individuals who I believe it is imprudent to assume will be deterred in the way that we were able to deter the Soviet Union.

I do not want to bet on the stability of a Saddam Hussein or a Kim Jong Il if they are in possession of a missile that can reach our territory with a warhead of mass destruction. I think we are in immediate jeopardy, and it is going to take, everyone agrees it is going to take, many years before we have a highly competent defense. They will argue that very effectively. It may take 30 years, and the second or third generation, before we have a defense that we can be completely confident about. We have to start somewhere.

Senator REED. I think we all agree we have started. The question is where are we going, what path, and how fast we are going, and without being facetious, but it seems that some of your foundation is psychoanalytical. You are looking into the mind, if not the soul, of these people, and concluding that they are irrational, whereas Joseph Stalin was reasonably rational, and others who are rather unseemly characters were rational, and essentially that is one of the great issues here, the rationality of our foes.

Let me say something else, too, that in your concluding paragraph you say the best way to protect against a missile attack is to keep our adversaries from investing in the missiles in the first place. One of the problems I have with that is, our adversaries have their own adversaries.

It would seem to me that the Indians and the Pakistanis are not developing nuclear weapons and missiles because they want to attack New York. It is because they are concerned about their border, the Iraqis, the Iranians, and as a result, if the premise is this national missile system is going to dissuade rogue states, or even developing states from developing missiles, I think that is an erroneous presumption.

Mr. PERLE. That is not my assumption at all. There are going to be additional nuclear powers. We do not worry about the British or French nuclear capabilities, and I do not worry about the Indian nuclear capability. I do not think India is going to attack the United States. I do worry about Saddam Hussein. I do worry about Kim Jong Il.

Senator REED. So this comes down, essentially your presumption is that you just feel that they are irrational, that they will sacrifice themselves and their regime in a conflict or a contest with the United States.

Mr. PERLE. I do not know whether they will or not, but I do not think you can rule that out. That is the difference. You can take the position that you are prepared to take that risk. Let us not have a defense and we will hope that neither Saddam Hussein, or Kim Jong Il, nor someone else in the future does something that we would consider totally irrational and launch an attack on the United States. That is a risk that I do not think we need to take,

and given the catastrophic nature of getting that wrong, I want to err on the side of prudence and be able to intercept that missile.

To repeat, this applies to an accident as well. There are no guarantees there will not be an accident.

Senator REED. A quick comment in response. The accident, there is also a possible consequence of our abandoning the ABM Treaty in that the Chinese, or perhaps even the Russians, decide they had to increase their alert status and for the Chinese to put warheads on their missiles, which ironically increases the chance of a dangerous accidental launch, but let me also go to Mr. Coyle for a quick question.

It seems to me, as we go down here, we could find ourselves in a race between the offense and the defense, between our limited defensive shield and the capability of Iran or Iraq or North Korea to take offensive weapons and make them more effective than our defense, and in that way do you have any comment about who wins the offense or defense? You have looked at these systems.

Mr. COYLE. Yes, sir, Senator Reed. It is a classic comment, really, certainly not original with me, that in such matters as we are discussing here today, the offense always has the advantage. The United States being an open society, the defense trade journals will publish details of the work that we are doing on missile defenses, and an adversary will have insights about how to build countermeasures and decoys that could be very difficult for us to deal with.

Senator REED. Thank you very much. Thank you, Mr. Chairman.

Chairman LEVIN. Thank you very much.

Senator Bunning.

Senator BUNNING. Thank you, Mr. Chairman.

Mr. Berger, in your opening statement you say that we should take into account the reaction of the Chinese when we assess the risks and costs of developing missile defense for our citizens. Well, as Jim Inhofe has said, for years now over our strong objectives, the Chinese have been providing ballistic missile technology to many rogue nations, nations like North Korea, Iran, Iraq, and Pakistan that are the source of this missile threat to the United States.

If the Chinese had not been providing this technology to these nations, we probably would not be here talking about this today. We would likely have no missile threat to us, at least not right now. Do you think that the Chinese should have thought about the risks and costs of giving missile technology to other countries like North Korea?

The risks and costs to the Chinese turn out to be that we are forced to develop a system to protect ourselves. They may not like it, but they have made their bed and now they are going to have to sleep in it. Do you think that we should ignore the threats that have been created as a result of the Chinese proliferation, that we should let the Chinese, through third countries, create a threat to us and then not respond to that threat because they may not like it?

Mr. BERGER. I do not think it is a question at all of what they like, Senator Bunning. I think that the Chinese proliferation has been something that has been a serious problem. We spent a considerable amount of time in the Clinton administration trying to

get greater constraint on Chinese proliferation practices. We made substantial progress in the nuclear area. We have made less progress in the missile area, and there is no question that the Chinese, among others, have added to the capability of the North Koreans and others.

My point is simply this, that we cannot ignore, in assessing the overall consequences of this, what effect it will have in Asia. We are basically saying that we are acknowledging that this system will defeat the Chinese deterrent. Some are even suggesting that is part of its purpose, but we are saying the answer. The administration has said as well, we will just say, "Fine, the Chinese can build up."

I find that actually to be a strange posture for the United States to be in a sense acquiescent to the buildup, and the only point I am trying to make here is that we have to assess as part of this overall equation, and it may lead ultimately to the conclusion that the best part of wisdom is going forward with a robust national missile defense.

But the part of the equation is, what does it unleash in China or in Asia? What does China do? What do Pakistan and India do as a result?

Senator BUNNING. I think we understand that. I think because of the fact of the Chinese intervention in the creation of third countries and their proliferation, that we have reacted to that.

Let me ask you some other questions. I understand that you were at the law firm of Hogan & Hartson. You represented the Chinese government, is that correct?

Mr. BERGER. That is not correct. I was at the law firm, along with my distinguished friend, Senator Warner, of Hogan & Hartson for about 15 years, but I did not represent the Chinese Government.

Senator BUNNING. Someone at the firm did.

Mr. BERGER. I do not know. There are 860 lawyers at that law firm, sir.

Senator BUNNING. That is a lot of lawyers.

Mr. BERGER. It sure is.

Senator BUNNING. God help us all. [Laughter.]

You do not have an ongoing relationship with that law firm?

Mr. BERGER. I have my own firm now. They are a client of my firm, but I do not have any kind of—

Senator BUNNING. You do not have any relationship with the Government of China?

Mr. BERGER. I do not.

Senator BUNNING. In your prepared statement, you indicated that negotiations with Russia to modify the ABM Treaty would be difficult if we did not know the purpose and the architecture of the system. The purpose of the system is to protect our citizens against a limited ballistic missile attack. The reason that we do not have a defined architecture, as the administration has repeatedly explained, is because we do not know what will work the most effectively.

The way to find that out is to conduct a rigorous testing program. That is what the administration is doing. Don't you think

that it is irresponsible not to be sure we have the best system available to protect our citizens?

Mr. BERGER. Senator, the Pentagon and the Ballistic Missile Defense Organization said to us repeatedly during the 1990s that the most effective, fastest, affordable way to deal with the threat, I think all of us are saying, is the most immediate threat. That is the rogue state missile threat against the United States, to which the best response was a land-based, mid-course, limited system.

Senator BUNNING. But that was considering we were going to use the ABM Treaty, and it would still be in effect forever.

Mr. BERGER. No, that was inconsistent with the ABM Treaty, which is why we went to the Russians to seek to modify it, and why we reserved the right ultimately to decide to stay within it, but now we have a situation where we have blurred what we are doing here. Are we still focused on rogue state threats to the United States? Are we focused now on covering Europe?

Senator BUNNING. No. I think we are focused on protecting the citizens of the United States, primarily.

Mr. BERGER. I agree with that, Senator. That should be our only overriding and single-minded concern.

Senator BUNNING. I think that is the Bush administration's overriding concern. I cannot help what is being said in the press by other people.

Mr. BERGER. But what I am saying, Senator, is that acknowledging that, which I agree is not only a moral but in a sense a constitutional and patriotic responsibility, does not predetermine how you do that, and in doing that we cannot only look through the prism of saying, how do we get this system up, we also have to say, are the allies going to support us, because we need their participation in building the system.

Senator BUNNING. The allies and/or Russia and/or any other country have no veto power over us protecting our citizens.

Mr. BERGER. Senator, now, Mr. Coyle knows more about this than I do, but most of the systems that I have seen require radars and other activities on European soil, and so we cannot—we do not ask their permission to do what we need to do, but the fact of the matter is, we would need to build and expand radar for the system we were designing in England and Greenland, and therefore we need to proceed in a way here that maintains some degree of consensus. If we are seen as pushing pell-mell when it is not necessary to abrogate—

Senator BUNNING. We can debate about how necessary it is.

Mr. BERGER. The last thing, I agree we should be engaged in an aggressive effort to look at other technologies. One of the things I said to President Putin when I saw him was, you talked about boost-phased sea-based systems. They could be of benefit to you. Why shouldn't we develop them? Why shouldn't we change the ABM Treaty?

Senator BUNNING. My time has expired. I thank you for your comments. Mr. Putin's comments in the paper were very constructive today.

Mr. BERGER. I agree, and that is why I think it is possible to do this if we do it in the right way.

Chairman LEVIN. Thank you.

Senator Cleland.

Senator CLELAND. Thank you very much to all of our panelists today. Let me just say, Mr. Berger, thank you very much for articulating what I think is the strategic question before us, and that is, are we going to pursue a WMD capability as our number 1 priority, or an NMD capability as our number 1 priority? I think that really is the question.

WMD, weapons of mass destruction, I think that is the great threat to the country. Every intelligence briefing I have been in for every one of the last 5 years that I have been here indicates the great threat to the country is not from some missile attack from some nation with a return address where you have to have a third-stage rocket or a nuclear missile, or a biological or chemical weapon, that is not the delivery system that is most likely to come our way. It is a WMD threat, weapons of mass destruction, nuclear, biological, chemical, coming from a terrorist threat, backpack, truck, or whatever. That seems to be the way military installations have been attacked in recent years, the most recent being the U.S.S. *Cole*.

Now, I think that that is right on target, and so I think our number 1 priority should be defending against WMD, not so much NMD.

Now, in terms of treaties, I think that Mr. Coyle is correct, from what I understand, and being a strong advocate of the theater missile defense and research therein, namely supporting the Arrow missile defense system research and development, which is a very successful system with the Israelis going on, the third generation of Patriots, the Theater High-Altitude Air Defense (THAAD), high altitude intercept program, all of that is consistent with the theater missile defense, and can be targeted to a Saddam Hussein or some rogue state.

What bothers me is the abrogation of the ABM Treaty. We seem to be throwing the baby out with the bath water and triggering other things. About 3 days ago, I saw a chilling photograph on the front page of the *New York Times*. It shows the price that we are paying politically for pursuing pell-mell, as you say, the abrogation of the ABM Treaty to put together an NMD system that, at best, cannot be deployed for another 10 years; at best, is not the plexiglass shield that we are led to believe and; at best, is not the maximally effective against anybody who wants to put some decoys out there and attack either our forces or this country.

The chilling photograph I saw as a result of our pell-mell efforts to abrogate the ABM Treaty and pursue this NMD quest was the President of Russia and the President of China embracing in a friendship pact. The last time Russia and China got together in a friendship pact was when Mao Tse Tung and Stalin got together, and a few months later the Korean War broke out.

A few years later, the Vietnam War broke out, all with the support of Russia and China working together against the United States. That is a strategic concern I have. That is the price we are paying for this pell-mell pursuit, as you mentioned, on NMD, which I think is not necessary.

Let me ask you, Mr. Berger, if you do not agree with this statement. It is a statement by Mr. Ivo Dadler of the Brookings Institu-

tion, quoted in today's *New York Times*. "Treaties that place limits on the testing and deployment of defensive systems provide predictability to all sides about the future strategic environment, and it is that predictability that will enable Russia to avoid worst-case assumptions and to continue to reduce its nuclear arsenal significantly. It is wrong to equate arms control treaties with the Cold War. Treaties are an instrument for reducing tensions among states in a Cold War, and for avoiding a return to the Cold War." Is that something you would agree with?

Mr. BERGER. Yes, I do, Senator.

Senator CLELAND. Let me just say, would you also not agree with the German official quoted in the *New York Times* today about the impact of the ABM Treaty on our allies, particularly our NATO allies, with whom we just fought the Balkan War? The German official is quoted as saying, "If the ABM Treaty is changed, it should be a negotiated solution between the United States, the Russians, and the Europeans, namely Germany. Our concern is that there is a framework that has served us well, and that we should only do away with it, with the old framework, if we have a better one."

Mr. BERGER. I do not believe that we ever should rule out unilateral action. I do not. I agree with my colleagues up here that the Russians do not have a veto, but I do think that agreed constraints on defense are not obsolete. They do provide predictability. They are likely to diminish the chance that the consequences of our proceeding will solve one problem—that is, the rogue state problem—and aggravate another problem, and that is the tension and uncertainty.

Senator CLELAND. Is it not true that for a number of years with the Arrow missile system, with the upgrade of the Patriot, with the THAAD, high-altitude intercept, we have been pursuing at a reasonable pace theater-based antimissile technology to defend our troops and our allies in a theater, in a region? Isn't that true?

Mr. BERGER. Yes, and in 1993, when the Clinton administration came into office, one of the things that came out of the Bottom-Up Review (BUR) with Secretary Aspin was to reorient our programs to focus on TMD, and all of those programs that you mentioned are complaint with the ABM Treaty, as we learned in the Gulf War.

Senator CLELAND. Mr. Coyle, I was concerned today about another piece in the *New York Times*, where one senior officer in the Pentagon says, missile defense is their number 1 priority, namely, the administration's. He said we have to find a way to deemphasize conventional programs to pay for strategic defense.

That is the thing that bothers me, that you have a 57 percent plus-up, of \$8 billion for so-called missile defense, which at best in 10 years will give us only a rudimentary system that is not the plexiglass shield that is contemplated. At the same time, our Service Chiefs have testified we have \$30 billion in unfunded requirements, we have 75 percent of the United States Army's equipment more than half of its life gone, we have the average age of American aircraft 18 to 20 years of age, and we have a Navy under 300 ships.

It does not seem to me to be very smart for us to put this pell-mell pursuit of some National Missile Defense Program, which at best will not provide the security that we think it is going to pro-

vide, and does, at worst, mitigate against our relations with potential adversaries now, Russia and China who have embraced each other, in each other's arms, so I am very concerned.

Mr. Coyle, you mentioned the Manhattan Project. I understand we have already spent about two or three times the amount of money on missile defense and research as we spent on the Manhattan Project.

Mr. Chairman, my time is up.

Chairman LEVIN. Thank you, Senator Cleland.

Senator Allard.

Senator ALLARD. Thank you, Mr. Chairman, and thank you for having this important hearing. I also want to thank the three witnesses for taking time to be here, and Mr. Chairman, at today's hearing I would just observe that this is the third hearing in 7 days on missile defense. I am very glad to see that protecting the United States and its allies and friends from incoming missiles is a high priority for the committee.

I look at the number of full committee hearings we have had this year, and 25 percent of our full committee hearings have been regarding missile defense, and that is why I am glad we are focusing on this critical need and threat, and look forward to working with my colleagues to ensure that we address the needs of missile defense.

Mr. Chairman, I too have a small piece of information that concerns some of what my colleague from Georgia just mentioned with respect to Russia and China. President Putin stated in a news conference just yesterday that: "As for a possible response, a joint reply of Russia and China to a U.S. withdrawal from the 1972 ABM Treaty, each state itself decides what it is to do and how. It is possible in theory, but in practice Russia plans no joint actions with other states in this sphere, including China."

Now, Mr. Coyle, last week you wrote an op-ed piece for the *Washington Post* titled, "The ABM Ambush," in which you made some interesting claims. That piece opened with the following sentence, and I will quote: "Despite claims by some in the Bush administration, the Antiballistic Missile Treaty is not an obstacle to proper development and testing of a national missile defense system."

That claim is certainly at odds with statements made by both Deputy Secretary Wolfowitz and General Kadish, who testified earlier this week in this committee. They said they had already identified at least three development and testing activities in the coming months which, in their words, "have the potential of raising serious ABM Treaty compliance problems."

They also pointed out that the compliance determinations are not simple matters, and, in fact, Secretary Wolfowitz said, "this is a genuinely complicated problem, because in the, what is it now, 29 years since the treaty was signed, we have had a lengthy, and I would actually say, tedious, record of going over these issues with the Russians. You have to look at that record. You have to examine it. You have to weigh American positions and Russian positions. We are in a very difficult zone."

Mr. Coyle, in February of this year the Office of Operational Test and Evaluation at the Department of Defense issued the oper-

ational test and evaluation report. Your office made some very detailed recommendations and conclusions, and so my question is, when you were the head of OT&E, did your office conduct studies or analysis concerning ABM Treaty compliance?

Mr. COYLE. Yes, sir, Senator Allard, we did. We looked at the question of how these various tests would be done, and with respect to the work at Fort Greely that is being proposed by the administration, if the administration wants to turn Fort Greely into a test site for NMD, the treaty permits the administration to declare Fort Greely as a test site. As I said earlier, it has already been a place where the Army has done cold-weather testing. So if they want to do more testing, but specifically on NMD, that is something that the treaty would permit.

Senator ALLARD. Department of Defense directive 2060.1 prescribes procedures for compliance review of DOD activities. What role in assessing compliance does that directive provide for the Director of Operational Testing in the Pentagon?

Mr. COYLE. It does not provide a role for the DOT&E.

Senator ALLARD. Did every one of the 50 activities go through your compliance review group?

Mr. COYLE. No. We were looking at ways to improve testing. For example, I supported and recommended the initiative which the Bush administration is now taking to add testing capabilities at Kodiak.

Senator ALLARD. In testimony before a Governmental Affairs Subcommittee, the head of the Defense Department's compliance review group was asked numerous questions like the one I just asked you regarding the compliance of various potential testing activities for both theater and national missile defense, and he said, "we cannot make judgments on questions like that until we see the actual system design." So, if the head of DOD's compliance review efforts cannot make those assessments, how are you able to assert what is and is not a treaty obstacle to our missile defense plans?

Mr. COYLE. So far, I have not seen anything proposed that would come into conflict with the ABM Treaty any time soon. For example, we have just been talking about the Fort Greely work. A different example is the PAC-3 test, which Mr. Berger brought up a little while ago. That is a test of a short-range missile system. Tactical missiles are not governed by the ABM Treaty, and if the Department of Defense wants to do short-range tests, that is something we do all the time.

Senator ALLARD. Are you aware of the administration's statements that the United States will not violate the treaty?

Mr. COYLE. Yes.

Senator ALLARD. Then on the test-bed restructure, hasn't the program been restructured significantly since your tenure at the Office of Operational Test and Evaluation at the Department of Defense?

Mr. COYLE. It is beginning to be restructured. General Kadish has proposed a much faster rate of testing, something which I testified would be necessary in my testimony before the House last fall. General Kadish has talked about doing four or five tests per segment per year for each of the segments of national missile defense, maybe a test every month. I do not know whether they will be able

to sustain that kind of a test rate, but they are proposing it. They have not yet developed test plans, nor reviewed those test plans with my former office, something I hope they will do.

Senator ALLARD. The expanded test bed will provide an opportunity for more realistic intercept and target trajectories during testing. Do you believe this is consistent with your recommendations to improve the missile defense test program?

Mr. COYLE. Yes, I do.

Senator ALLARD. Mr. Chairman, my time has expired.

Chairman LEVIN. Thank you, Senator Allard. Senator Nelson.

Senator BILL NELSON. Thank you. What is it about the present test, Mr. Coyle, from Vandenberg to Kwajalein, that does not break the ABM Treaty?

Mr. COYLE. Kwajalein is an accepted test site, along with White Sands, under the ABM Treaty. While the treaty allows for the test sites to be established, the Russians could establish new test sites and so could we; Kwajalein is already a permitted test site under the ABM Treaty, and so the tests we have been doing there for years, and I expect we will continue to do there for years, are permitted.

Senator BILL NELSON. So a similar test could be done at Fort Greely and it not break the ABM?

Mr. COYLE. Yes. The United States would have to declare that that was going to be a new test site, but that is all they would have to do.

Senator BILL NELSON. You mentioned Kodiak Island testing. That would not break the treaty. Can you repeat that, please?

Mr. COYLE. Yes. Once again, the administration would have to declare that Kodiak was to become a new test site in addition to Kwajalein and White Sands, but they could do that. As I said, it is something I would support, because it produces more realistic engagements than the current geometry.

Senator BILL NELSON. In Mr. Perle's testimony he mentioned that, as we look at a conflict between India and Pakistan, the Aegis system could be deployed off the coast that could knock down an ICBM launched from one to the other. Is the current technology of the Aegis system able to do that?

Mr. COYLE. No, sir. The standard missiles that are on the Aegis destroyers and cruisers are not capable for NMD-class engagements, nor are the radars. The Aegis radar is a wonderful radar for ship defense, but it is not capable of NMD engagements.

Senator BILL NELSON. Would the testing of such a system break the treaty?

Mr. COYLE. I suppose you could find lawyers who could argue that. It could be, but for example, you could take an Aegis destroyer today and go down off the coast of Florida and look at missile launches there and get the same data, where you were launching satellites, or whatever. So you would have to go out of your way to do it, and I am not sure it would prove much if you did.

Senator BILL NELSON. But to develop a system that would knock down a missile from an Aegis platform, you are saying that that would violate the treaty?

Mr. COYLE. Yes. The treaty prohibits mobile systems, and a defense system on a Navy ship would be a violation of the treaty, but

we are not at that point yet. We do not have either the rockets or the radar we need for that.

Senator BILL NELSON. In your opinion, how long down the road would that occur before the treaty were to be abrogated?

Mr. COYLE. I would not be surprised if it took 10 years for a ship-based defense to be built. You are talking about developing a new missile that is twice as fast as the existing missile. That would take many years, as it has for the mid-course missile. You are talking about a new radar that would also require extensive modifications to a ship, or perhaps a new ship or ships, and all of these things would take time.

Senator BILL NELSON. Let me ask you about the descent phase, which you referred to as terminal. Tell me something about the development of a system that would be effective in the terminal phase of an ICBM's trajectory.

Mr. COYLE. Tactical systems like PAC-3 and THAAD are coming along quite well, and they are effective. They have not been through realistic operational tests yet, so they still have a ways to go. There are many years before they will be ready to be fully deployed, but they are effective in defending themselves, defending an area of troops, or a battery that they are trying to defend.

The difficulty with extending that technology to national missile defense is now you are trying to defend a very large area, and these theater systems are not capable of doing that. They are good at defending the troops they are trying to defend, but they do not yet have the technology to defend an area, say, the size of the United States.

Senator BILL NELSON. I want you to know how appreciative I am of this discussion. This has been quite illuminating to me. We have talked about Russia's reaction. What would be, in your opinion, China's reaction, as we proceed with robust research and development, whether it did or did not break the treaty? I would like to hear your differing opinions on that, Mr. Berger.

Mr. BERGER. I think China has a strategic modernization program. They have about 18 or 20 strategic missiles. There is a program that they are planning. I think one would expect probably an acceleration of that program, and that could trigger consequences all through Asia.

That to me again is not, ipso facto, a statement that we should not do this, but it seems to me we ignore that chain of consequences at our risk. That is part of the overall equation. If the incipient nuclear debate in Japan winds up over 10 years, as we have nuclear buildups throughout Asia, changing the fundamental direction of Japan with respect to nuclear weapons, I am not sure that we will have been better off in the end, and so I think it is a factor that we have to know more about, this committee I think should inquire about, and is part of the equation.

Senator BILL NELSON. Mr. Perle.

Mr. PERLE. Senator, I think we probably have the capacity today to destroy the Chinese deterrent in a first strike, if we chose to do so, and that is a situation that they have tolerated I assume because they reason that we are unlikely to do that, or at least it is sufficiently unlikely so that they do not want to make a huge effort to deal with it.

I think we must be very careful about slipping into the idea that because we had a Cold War with the Soviet Union, and because we have differences with the Chinese, we are going to have another cold war with the Chinese to which all of the rules and history of the Cold War between the United States and the Soviet Union will now apply. I see no reason to expect a Cold War with China.

We will have our differences. I think we will be able to resolve those differences, and if at the end of the day there is a Cold War with China, it will have to be the responsibility of the Chinese. We should take no actions that would cause that Cold War, or that situation to occur between us.

Senator BILL NELSON. I want to get Mr. Coyle's response to the question as well, but let me just say, on that note, it seems to me that in a common-sense way, Mr. Chairman, of approaching this whole thing so that you do not make a decision that you are going to break the treaty, but rather, recognizing the sensitivities of our relations with others, as Mr. Perle has suggested, with regard to the Chinese; that you work with them, showing them how it is in their interest that we continue a robust research and development program of missile defense. That eliminates a lot of the problem, as long as you are working along with people.

I would like Mr. Coyle's response.

Mr. COYLE. I have been very interested to see that some members of the Bush administration have said that they are interested first and foremost in an aggressive testing program, and testing, not deployment. This is an emphasis which I applaud, and I think, if they follow that emphasis, the issues with the ABM Treaty will become moot.

Chairman LEVIN. Senator Sessions.

Senator SESSIONS. Thank you, Mr. Chairman. On that subject, Mr. Coyle and Secretary Berger, this Congress has spoken. As Senator Lieberman said, we voted 97 to 3 to deploy a system as soon as technologically feasible. The President signed it, I suppose, with National Security Adviser Berger's advice, and that committed us on a course that seems to me, in all honesty, of suggesting that we have to do something about this treaty.

The whole purpose of this treaty was to prohibit a national missile defense from being built by the United States. The first clause of the first article says, each party undertakes not to deploy an ABM system for a defense of the territory of its country, and not to provide a base for a defense, and not to deploy ABM systems for defense of an individual region, even, except as provided in Article III of the treaty.

So, we are really looking at something here that was a treaty between two nations, one of which no longer exists, the Soviet Union, and we are facing threats now from 29 nations that have ballistic missiles. So I just think that the honest, direct approach is to create a new form of relationship in the world, including a statement about Russia joining NATO—what a comment that was.

I mean, we do have an opportunity for new relationships in the world, but we must not allow this Nation and this President to be intimidated from carrying out his duties to protect our Nation by threat of some rogue nation with a few missiles that could reach

our country and kill, perhaps, millions of people. That, to me, is basically where we are, and I am somewhat frustrated, I have to say.

The President is negotiating daily. He is negotiating with the Russians and the Europeans daily and consistently. He is making progress in that negotiation, and we have the former National Security Adviser and others in this Congress undermining his ability to negotiate. They appear to think that we do not want to fund this program, we do not have to fund it, but I think we ought not to undermine the President's ability to have the freedom to do what we voted 97 to 3 to do.

I think it is a big issue for America, and I think this is the right thing for this country to do, and I believe we have to be careful on this committee how we conduct ourselves, that we do not tie the hands of the President of the United States.

You have been there, Mr. Berger, that it is difficult to work out negotiations. You say negotiate, but if you argue the position of the Russians here on this floor, then how can you negotiate effectively? I would ask you to respond to that.

Mr. BERGER. Senator, I hardly believe that I am arguing for the position of the Russians. The only country I care about is the United States. I was invited to testify. I am giving you my best assessment here. I do not think it is any more irresponsible for me to offer my view of how best to do this than it is for Mr. Perle to say we are going to abrogate the treaty no matter what the Russians think. President Bush probably swallowed that pretty hard in terms of going into a negotiation with the Russians. If we are going to present them with a *fait accompli*, I do not know how we create a new relationship.

All I am saying, Senator, is let us take the time to see whether we can do this, to create a new relationship, a new strategic relationship, and not do it on a schedule, which Mr. Coyle says is not necessary. That makes that much more difficult to do.

I applaud the President's efforts to negotiate this with President Putin, and I hope he succeeds.

Senator SESSIONS. Mr. Coyle, in June, in *Defense Monitor*, you wrote a number of articles about this question. You question the threat the United States faces, and you wrote, "One question that has dogged NMD is exactly who is the enemy? Is it North Korea? Is it China? Is it Iran, Iraq, or Libya? Is it Russia? Is it all these countries?"

A year and a half ago, North Korea was emphasized as a threat, but thanks in good measure to fine diplomatic efforts of former Secretary of Defense Bill Perry, North Korea no longer seems to be the same threat as before.

That reflects your observations and thoughts, but you are not privy to intelligence information, and you do not consider yourself an intelligence expert, do you, Mr. Coyle?

Mr. COYLE. No, sir. I think the best way to answer your question is in personal terms. I have a son who serves overseas in the military. I am a heck of a lot more concerned about his danger, being attacked by short-range missiles, than I am concerned about the United States, say, Los Angeles being attacked, where I have recently moved. That is my point.

Senator SESSIONS. I understand that, but let me read you what the Director of Central Intelligence Agency, George Tenet, said in a committee hearing over a year ago: "Over the next 15 years, however, our cities will face ballistic missile threats from a wide variety of actors, North Korea, possibly Iran, possibly Iraq, and in some of these cases this is because of indigenous technological development and in other cases because of direct foreign assistance, and while the missile arsenals of these countries will be fewer in number, constrained to smaller payloads and less reliable than those of the Russians and Chinese, they still pose the lethal and less-predictable threat. North Korea already has tested a space-launched vehicle, the Taepo Dong I, which could theoretically convert into an ICBM capable of delivering a small biological or chemical weapon to the United States already." He goes on to say, "moreover, North Korea has the ability to test its Taepo Dong II this year. This missile may be capable of delivering a nuclear payload to the United States. Most analysts believe that Iran, following the North Korean pattern, could test an ICBM capable of delivering a light payload to the United States in the next 5 years. Given that Iraqi missile developments are continuing, we—that is the CIA—think that it, too, could develop an ICBM, especially with foreign assistance, sometime in the next decade."

There was a commission—you were not on the Rumsfeld Commission, I know—a bipartisan commission reviewed this subject and they said the threat could be, would be real by 2005, so that is the basis, I think, of where we are.

My time has expired. I believe that we do have a threat, we do have a commitment to deal with it, the President is working with our allies, he is working with the Russians. I believe he is going to be successful, but at any rate, we have an opportunity and a responsibility to defend this Nation from missile attack, we have the technological capability of doing so, and we need to get busy about deploying it before we are vulnerable.

I thank the chairman.

Chairman LEVIN. Thank you, Senator Sessions.

First, on the question of the National Missile Defense Act, which has been raised both by Senator Sessions and Senator Lieberman, is it not true, Mr. Berger, that there are two provisions in that act, one of which has been referred to this morning, which is the intent to deploy as soon as technologically feasible, but another provision that it is also the policy of the United States to negotiate further reductions in nuclear weapons with Russia, is that not correct?

Mr. BERGER. That is correct, Senator.

Chairman LEVIN. Is it not correct that if we unilaterally withdraw from the ABM Treaty, that it is possible that the Russian response will be not to reduce or dismantle their weapons, not to carry out START II, not to negotiate START III, but to maintain the number of nuclear weapons they have and, indeed, MIRV some of their weapons? Is that not true?

Mr. BERGER. I think that is also true, particularly if we seem to be doing it in a precipitous way.

Chairman LEVIN. So there are a number of provisions of those acts, not just the one that has been referred to here this morning, but the other provision, which could be in conflict with the policy

of the United States to deploy a national missile defense system when technologically feasible.

Mr. BERGER. When the President signed that, he made it clear that his deployment decision would be based on his evaluation of four factors: cost, threat, technology, and the overall security effect on the United States.

Chairman LEVIN. The next question goes to Mr. Coyle. How much operational capability do the five test interceptors provide at Fort Greely? Let me put it another way to you: The administration proposes to build five test silos at Fort Greely and place NMD interceptors in them by 2004. They plan to link the five test missiles to an upgraded Cobra Dane radar in Shemya to provide a rudimentary operational capability to shoot down a North Korean missile.

First of all, could you do the testing with one silo instead of five, if that was the major purpose?

Mr. COYLE. Yes, sir.

Chairman LEVIN. So when you say that they could declare it as a test site, they have already told us—and this is Mr. Wolfowitz—that it is his intention to have the option, as he put it, to have a rudimentary operational capability at Fort Greely as soon as possible. That is the option that they want as soon as possible. Is that something different from just declaring it as a test site? Is it inconsistent with declaring it as a test site? Is it a second purpose? How would you define that?

Mr. COYLE. If the purpose of having a test site there is to give soldiers training, that would be a fine thing, I suppose. If the purpose is to learn about the effect of the very cold weather at Fort Greely, that would certainly be a worthwhile thing to do. But they do not plan to actually launch missiles from those silos for test purposes—the missiles are going to be launched from Kodiak or Kwajalein, as I understand it. Since they do not plan to launch any missiles from those five silos for test purposes, they will not play much of a test role. You can question whether or not the investment in five silos is needed to give them the experience working with cold weather. I think you can do that equally well with just one silo.

Chairman LEVIN. Have you heard or read Mr. Wolfowitz's testimony that it is their intention that they have the option as soon as possible to have a limited operational capability at Fort Greely?

Mr. COYLE. Yes, sir, I have.

Chairman LEVIN. Is that a different purpose from a test site?

Mr. COYLE. Yes, sir, it is.

Chairman LEVIN. Is that permitted under the ABM Treaty?

Mr. COYLE. Under my understanding, it would not be.

Chairman LEVIN. So this, then, comes down to a question that if a principal purpose is an operational capability as soon as possible, which may, indeed, conflict with the ABM Treaty. Is that true?

Mr. COYLE. Yes, sir, it would be a new deployment site.

Chairman LEVIN. He did not quite say that. He said, to give us the option to do that as soon as possible, I do not want to put words in his mouth. That is what the compliance review group, I guess, will look at, as to what the purpose of that site is, but you said this morning that if they declared it as a test site, that is fine.

It may not be worth the money in terms of that additional value it gives them, but that that would be consistent with the treaty if they declare it as a test site.

If they declare it as both a test site, but a site which would also give them the option as soon as possible to have a limited operational capability, then what is your understanding of the treaty connection?

Mr. COYLE. If the declaration were that this is a new operational site, that would be in conflict with the treaty.

Chairman LEVIN. Now, Mr. Berger, do you have any comments on that in particular?

Mr. BERGER. I think it is very important, the line of questioning you are pursuing, because while we do not know that the plan of the administration is to—they are not going to violate the treaty. They have said that. But, of course, withdrawal is not inconsistent with violation, so the question is, is this test plan going to cross that line, and it seems to me in three respects there are questions that this committee needs answers to.

The treaty says you cannot deploy an ABM system for defense of territory or its country, and not provide a base for such a system, so there is the first question of what is the nontest purpose of what is happening in Alaska.

Second of all, while I agree with Mr. Coyle that if the PAC-3 test is against a short-range missile, that is not a violation. If the PAC-3 test is against a strategic missile, or if the Aegis cruiser is used in a test, in an ABM mode, those would be a violation.

Now, it does not say that on the fact sheets, but Mr. Wolfowitz has told us that they are going to bump up against the treaty in February. That, it seems to me, leaves an important area for clarification. That is, is it the plan of this administration to engage in activities in this fiscal year which in fact will cross the line of the treaty? I think this committee and the American people have a right to know the answer to that question.

Chairman LEVIN. Much of our three hearings are aimed at getting an answer to that question. As a matter of fact, I have asked the Secretary of Defense exactly that question in a letter to which we do not yet have a response, but that is a critical question, because it is not just the administration which must make a judgment as to whether or not it wishes to abrogate the treaty, giving notice, of course. That is a part of the treaty, to give notice to pull out of the treaty, but nonetheless, it must make that judgment.

Whether or not the value of these tests marginally give them anything, whether they want to do that or need to do this testing early, leaving themselves very little time to negotiate what they say they want to negotiate with the Russians, putting themselves in a time box which is very severe in terms of a new agreement, whether they want to do that, whether they need to do that, whether the marginal gain in terms of testing outweighs the loss of time which is necessary to negotiate, or might be necessary to negotiate particularly a whole new structure. Putting aside modifications to the ABM Treaty, that is a judgment which the administration must make in the first instance, whether or not to give notice of withdrawal, and whether or not what it is asking for in this

budget will, in fact, put them in a position where they are, through their testing program, conflicting with the treaty.

However, we have a responsibility of whether to fund that after we figure out what they are doing. After they notify us what their intent is, we, as a Congress, have the responsibility to decide whether or not we are safer with such a withdrawal from the treaty, a unilateral withdrawal if that is what it takes.

Now, Mr. Perle takes the position you ought to withdraw anyway. Your position is pretty clear. It is a radical proposal, as you have suggested and self-described it, but nonetheless it is very clear. Whether or not these tests bump up against the treaty is not relevant to you. You believe we ought to withdraw from the treaty as a relic of the Cold War in any event.

By the way, I happen to agree with you, the Cold War is over, but that also means that we should deal with Russia on a different basis than we used to deal with the old Soviet Union, and you say you cannot imagine anybody sitting across the table from you in Russia who could possibly have any problem with these tests. I think we ought to be listening to what they are saying.

Why is it that they are disturbed by these tests? I am not saying give them a veto. God knows, we are not going to do that. We are not going to give anyone a veto, but we sure as heck ought to consider, at least, what their reaction is, and whether or not, given what they tell us their reaction is going to be—whether we think it is logical or not, given what they tell us their reaction is going to be or may be, the same with the Chinese, whether we are more secure with or without pulling out of the treaty. I think that is the overarching question which we all have to address.

My time is up.

Senator Warner.

Senator WARNER. Thank you, Mr. Chairman. I know we have kept our panel a little longer than we anticipated so I will be brief in hopes we can wrap up here. I think we've had a good session, a very good session. I'm going to try and ask two questions—one to you, Mr. Coyle, and one to each of our distinguished foreign-policy experts in hopes that maybe some others who are trying to follow this debate can get a better grasp on it.

I introduced you, or at least gave you my view, that you have a reputation for being pragmatic and objective, Mr. Coyle. I continue to believe that. Now, supposing there wasn't an ABM Treaty right now and that it had expired this year. Would you advise the President as to how to redesign the previous efforts by previous administrations—not only Clinton—but Bush before it, and so forth. Would you advise them how to redesign the architecture of a missile defense system to meet the threat of limited missile attack? Would you move out into space? Throughout the long time that I've been on this committee, 23 years, I've dealt with this issue, and time and time again I've put the question to people such as yourself: If there were no constraints of the ABM Treaty, would you do something differently? I've always believed that we could. If we had full authority to devise an architecture, particularly to defend against unlimited attack, we could utilize space, we could utilize mobility, we could utilize other aspects of our technology to move more swiftly with a greater likelihood of success perhaps at less

cost to the American people. My question is simply, if there were not the constraints of the treaty, would you be advising the President to do something different today, not unlike the architecture that was laid out here with the direction of the BMDO, Lt. Gen. Kadish, here in the past week or two?

Mr. COYLE. I believe I understand, Senator Warner. I understand the logic behind the layered defense. It does give you three bites at the apple. If you miss the missile in the boost phase, you have the mid-course and terminal phases left. I also believe that the United States could have the technology to do boost-phase defenses from ships, and under the ABM Treaty that would be a mobile system and mobile systems are not permitted.

The technology for boost-phase defenses from ships is much farther ahead than the airborne laser or the space-based laser in my view. The space-based laser is too heavy to even be lifted into orbit by any boosters that the United States has and the airborne laser has a very long way to go in development also. But ship-based defenses for the boost phase, I think, could become practicable. It may take a decade; it may be many years away, but I think it could become practicable.

Senator WARNER. But had we not had the ABM Treaty, we may well have done the research, development, and testing on that ability a decade ago and now be in a position where we could consider the deployment of such systems. My question to you is that there has been serious constraints by this treaty for decades and as a consequence we've labored along within the lawyers' framework of what we can and cannot do. I'm asking you to put the treaty to one side. I'm not suggesting by this question that you just trash it and shred it and tear it up—phrases that have been used in this hearing, unfortunately—but simply that it didn't exist. Or I might rephrase it: Suppose there was the opportunity for this President to say I can go and set up amendments to the ABM Treaty that would enable us to do other things. Would you recommend that he do some other things now prohibited by ABM Treaty within the framework of a series of amendments?

Mr. COYLE. Not for the foreseeable future. If the Navy wants to build higher velocity missiles for ships for boost-phase defenses, that's something they can do at White Sands, as they do now when they do standard missile tests. So, there's a lot of work that can be done on new missiles for Navy boost-phase defenses. If the Navy wants to build high-power X-band radars for ships that work on the seas, that's something else they can do, but that's not bumping up against the ABM Treaty either. I'm not trying to say that there isn't any conceivable thing that might ever occur that couldn't cause a problem with the ABM Treaty. Obviously, mobile defenses themselves are a problem with the ABM Treaty, but there is so much work that needs to be done, whether you talk about ship-based defenses or other defenses.

Senator WARNER. I understand it's a lot of work, but somebody has to start at some point in time to explore other options, other architectures, than the one that we have prodigiously followed for decades in the United States, in my judgment. That's the initiative that this President is taking and it raises legitimate debate as to whether or not those architectures come up against the ABM Tre-

ty. My question to you is could we not devise a framework of amendments to the treaty to accommodate the parameters of moving out into such architectures that you and other experts indicate should be explored if we're trying to pursue a defense against a limited attack.

Mr. COYLE. Yes, sir. My answer would be, yes, I believe we could devise such amendments and there is plenty of time to do that.

Senator WARNER. Now, to both of our other experts here. Mr. Berger, I've followed very carefully in the years that you were National Security Advisor to President Clinton the efforts to negotiate amendments to the ABM Treaty. The record is clear, for whatever reason, you didn't succeed, but I think you made an honest effort. I frankly think that the fact that our President had finally pointed out that there is a withdrawal clause and that he as President could at some point and time be forced to utilize that clause unless we can work out amendments to the treaty and/or a new framework might have been the tactic that is beginning to bring President Putin, in my judgment, around to an open discussion with the President on the parameters of either amendments or a new framework.

I'll start with you, Mr. Perle, since you feel so strongly. I think the option to not try and keep the ABM Treaty in existence is not preferable. I still think a two-step process is a wise one. I say that because, again, I have had the responsibility either as chairman or ranking member to get a bill through for the Armed Services Committee and that is a mighty train to drive through the floor of the Senate, and the appropriations likewise are difficult. I think it is extremely important that we do get an authorization bill this year, that it not be side-tracked by a continuing debate on this issue, and that we do, as a Congress, support our President in his initiatives with the funding and the authorization necessary for him to explore a new architecture and at the same time continue his negotiations with Russia. So, that's why I suggest a two-step process. But it seems to me it's in President Putin's interest to pursue that two-step process for the following reason. I'm beginning to admire him even though, incidentally, gentlemen, he has not yet met one single member of Congress and that puzzles me. I was with the first delegation that met Mr. Gorbachev led by Robert Byrd and the second delegation to meet Mr. Yeltsin led by Robert Dole. But anyway, Mr. Gephardt, who had considerable standing in this Congress, was not able to meet President Putin a few weeks ago, nor has anyone else. But in any event, I think he's an interesting man and he is trying to do his best with a country that is suffering economically and suffering in many other ways. It would be devastating, not only from a military standpoint but from an image standpoint, for the United States to withdraw from a treaty to which he attaches so much significance. I have to believe that our President, in pointing that out has done it properly thus far and that gives considerable leverage to these options whereby we can devise a framework of changes to the treaty to enable us to pursue such architecture as he and his advisors deem necessary. Do you share that view, Mr. Perle?

Mr. PERLE. Yes, I think on serious reflection, the treaty does nothing to enhance President Putin's security and he would be

well-advised to work with us in getting it behind us because it also puts the Cold War behind us.

Could I just add, Senator, the question you asked at the end, of course, prompts the reflection that if the ABM Treaty didn't exist today, would anyone propose that the United States and Russia negotiate anything that looked like the ABM Treaty? Of course, the answer is, nobody would propose that. So, we're dealing with a legacy. We're dealing with an historical legacy. Second, because we have spent a great deal of time in the latter part of this hearing on the question of testing and where the program is today and where it might go, we have tied our hands from 1972 until the present.

People who might have had ideas about approaches to missile defense that were outside the treaty were unable to do anything effective with those ideas. Companies that might have had scientists within them who had ideas knew that they couldn't get funded to produce programs that would violate the ABM Treaty. There was just an exchange with Senator Nelson about a ship-based system. You can take a narrow legal perspective and say, well, you could do research for years before you encounter the limitations of the treaty but I don't believe anyone is going to make a significant investment in a system that violates the terms of the treaty until the treaty is clarified one way or another. So, we're not going to build a sea-based system until the treaty obstacle to a sea-based system has been eliminated, and we are not going to look at the other new architecture that you are talking about until the treaty issue is resolved. It prevents us from applying our minds and our talent, our scientific talent, from solving technical problems. So, it isn't a question of how much can you do before you bump up against the treaty. No one invests in a business that is prohibited by regulation from operating and no one's going to invest in new approaches to missile defense until the treaty is clarified, and by clarified, I mean the obstacles within it are removed. So, if we want to put our technical genius to work, we have to deal with the treaty now and not pretend we can get started now and only deal with the treaty when we bump up against it, as we have heard today.

Senator WARNER. Mr. Berger, I commend your efforts to try and negotiate changes to the treaty. Let's talk about whether or not it would be in Russia's interest, quite apart from ours and their military considerations, to be faced with the fact that the United States, an acknowledged superpower, would withdraw from that instrument. It really relegates Russia to a second-class status, which we do not wish to do. We do not wish to embarrass that country and our President has said that many times. They're not our enemy. We have a number of programs with Russia today to help them in different ways, particularly with the struggle to prevent the proliferation of weapons of mass destruction. So, I think there is much at stake here, but you never put on the table that we might have to withdraw. I think this President has, and I think it's been to his benefit.

Mr. BERGER. Senator, first all, I think we can't rule out that possibility. I do think that it will, if we do it, as I said several times here, preemptively walk into the room, and say, sometime in the next several months, this is where we are going to be.

Senator WARNER. Yesterday Mr. Wolfowitz said in response to questions from me that there would be consultations with Congress.

Mr. BERGER. As you've said to me many times Senator, there are consultations and there are consultations when the shoe is on the other foot. But I would say that we should be exploring other technologies and I've made the argument to President Putin, for example, that sea-based, boost-phase defense is something that may be very much in their interest. In fact, he has spoken favorably about boost-phase defense. So, I don't believe that it is inconceivable at all that we could work out a new arrangement. What I think would be very damaging in the context of the end of the Cold War, as Mr. Perle has talked about, is to say we're withdrawing. We're not going to tell you what this new strategic framework is. We have no amendments on the table. We've not put one on the table with respect to the ABM Treaty. First, we want to withdraw, and then we'll sit down and talk about what comes next. I don't think that's an effective way to get a strategy framework, a new strategic framework that President Bush seeks.

Senator WARNER. I thank all the witnesses.

Chairman LEVIN. Senator Sessions.

Senator SESSIONS. Mr. Chairman and Senator Warner, I really don't believe that if we had to withdraw from this treaty we would be relegating them to second-class status. I just don't believe that. I think what we need to be doing is moving to a higher period of relationship between the two countries. I spent 2 weeks there in 1993 visiting with the Russian people and they are wonderful, talented people. I think somehow we can develop a new, positive relationship, not focusing on a relic of the old Cold War. One of the things that I would want to note here is in the ABM Treaty itself. Article 1 says each party undertakes not to deploy an ABM system for defense of its territory. Then, I think it is healthy that we begin to make clear what it prohibited explicitly in it. In Article V it says each party undertakes not to develop tests or deploy ABM systems or components which are sea-based, air-based, space-based, or mobile land-based. Now, Secretary Wolfowitz has indicated that he believes, and it certainly makes sense to me, that we need a layered, comprehensive system, one system of defense against missile attack, that many of the component parts could serve all of our system. Wouldn't you agree, Mr. Coyle, that we would be constrained in developing that kind of system under this treaty?

Mr. COYLE. Eventually, yes.

Senator SESSIONS. You say eventually. Let me ask about an additional word in Article 5. Article 1 says we will not deploy a system. Article 5 says we will not develop, test, or deploy a sea-based, air-based, or mobile system. Doesn't that go further? Doesn't that even, perhaps, prohibit research?

Mr. COYLE. No, it doesn't, sir. I certainly was not a negotiator of the treaty, so I can't speak first-hand about this but I've talked to people who were involved in the negotiations first-hand. They point out that the ABM Treaty permits both countries to have a missile defense system, not a missile defense system of its entire territory but a missile defense such as we deployed briefly in North Dakota and the Russians around Moscow. It was understood under

the negotiations that both countries would—we have decided not to keep the system that we deployed—but if both countries wanted to keep that kind of a missile defense system, it was understood that they would need to continue to develop and improve and test that system. So testing a missile defense system was expected to take place.

Senator SESSIONS. What about a sea-based, air-based, or space-based system that seems to be pretty explicit. I'm sure they argued over every word. Now, Mr. Perle, were you there or do you have an opinion on that?

Mr. PERLE. I do. I was very much involved in the hearings that examined that treaty, and the simple answer is, we cannot test a space-based, a sea-based, or a land mobile-based system, period. We can't do it. Now, you can try to find ways around it by testing components that do not in and of themselves constitute elements of a system, and the question you have to ask is whether a furtive approach of that kind can ever be made to work and can ever be the basis on which we're prepared to commit serious resources to a development program. I don't think we can and don't think we should. I think it's very misleading when Mr. Coyle says "eventually," because you don't start developing a system you know you cannot deploy under the terms of the treaty. So eventually is today.

Mr. BERGER. Senator, I don't want to impose on your time but could I just say something? First of all, we have been working on a system for the last 5 years. The land-based mid-course system which is prohibited by the treaty and which would require either amendment to the treaty or withdrawal from the treaty and we've spent billions of dollars doing it. So, of course, you can do that. Second of all——

Senator SESSIONS. Wait a minute. Let me get that straight. You're saying that we are now in violation of the treaty?

Mr. BERGER. No, I'm saying that we have been developing and testing a land-based limited mid-course system consistent with the treaty and that we can't deploy it unless there's a change in the treaty or we withdraw. So, it defies the kind of economic-business model that Mr. Perle was talking about. Second of all, we can research the other technologies, and I think again Mr. Coyle has said that there's a lot of work we can do before we bump up against the treaty to give ourselves time to go to the Russians and say, let's talk about a sea-based system.

Senator SESSIONS. But the treaty says we can't develop. Where it says develop, test, or deploy, presumably that is an upward trend test. We know what test means. Develop it seems to me to mean no serious research.

Mr. BERGER. No, it does not, sir. The research is specifically permitted on sea-based and on other systems. We are doing research on sea-based systems and as I understand Mr. Coyle, if I read his remarks, there's a lot more research we need to do. If we went to the stage that we had to test, that would require a modification of the treaty, but that's not February or March.

Mr. PERLE. I think there is a potential for some real misunderstanding in these statements. It is true that the previous administration did work on a system which, if deployed in certain locations, would require an amendment to the treaty.

Mr. BERGER. We assumed it would.

Mr. PERLE. It was a land-based system and they essentially made a bet. I don't think they were ever serious about this, to be blunt. But if you give them the benefit of the doubt and assume they were serious about it, if they had another 16 years maybe they would have gotten around to deploying something, but they assumed that they would be able to go to the Russians and say, look, we're going to have 100 interceptors, which we're entitled to have. Under the treaty, we could have those at ground force. How about letting us have them someplace else. That was the extent to which they ran into the treaty and I believe they selected that program because there was such a modest modification to the treaty that they assumed the Russians would readily agree to that.

Mr. BERGER. Excuse me, I'm sorry. We have gone 3 hours and 15 minutes without getting gratuitous. I guess that must be the limit. We selected that system because BMDO and the Pentagon said that that was the fastest, most affordable, most mature system to get to a system that would be effective against the threat we faced which was the rogue state threat, and I don't think we should get into motivations, Mr. Perle.

Mr. PERLE. Set the motivations aside. When you get to any sort of ambitious system like a sea-based system, a space-based system, or a mobile system, you cannot do what Sandy Berger suggested could be done in the other case where the only change to the treaty would have been permission to deploy 100 interceptors in one location rather than another location and that was a trivial change in the whole program over many years and not just this administration. It was true under the Bush administration as well. The whole program of ballistic missile defense has been conducted within the suffocating constraints of the ABM Treaty, which as you rightly observe, begins by saying neither side will protect its national territory. That is the treaty we're talking about. That is the artifact of the Cold War and we can talk all week about how to work around, how to amend, how to revise, how to negotiate. At the end of the day, you're talking about taking a treaty that prohibits defense and revising it so that it permits defense. The straightforward, honest approach is to say the treaty no longer serves our security interests, and go on to negotiate something entirely different with the Russians, which is a security arrangement for the future.

Senator SESSIONS. I think that is precisely correct and I think that is what Condoleezza Rice and the President have concluded. I would just mention in Article 6, I read that as a clear prohibition of theater missile defense if it any way could be utilized to knock down incoming ballistic missiles. It prohibits capabilities to counter strategic ballistic missiles or their elements in flight trajectory and not to test these missiles in the ABM mode. Then it goes on to say, in subparagraph b, we commit not to deploy in the future radars for early warning of strategic ballistic attack except at locations along the periphery of our national territory. So, wouldn't that complicate both our desire to integrate in a layered approach theater missile defense and our radar systems that might be necessary? Wouldn't we be running into the treaty on those two issues also?

Mr. BERGER. Senator, I'm sure Mr. Perle would have a slightly different take on this but all of the theater missile systems can proceed unencumbered. Our understanding with the Russians—

Senator SESSIONS. But not in an ABM mode.

Mr. BERGER. Not in an ABM mode. That is correct. We have an understanding with the Russians. If they're tested against a missile that is proceeding at more than 5 kilometers per second or has a range of more than 3,500 kilometers, that's a ballistic missile. That's the demarcation between theater missile defense and ABM and I think all of our TMD programs are proceeding unencumbered by the treaty. I think the one concern I have about the new approach is whether we lose focus on getting the TMD systems done, up, and ready as Mr. Coyle has said, and getting to the end zone on a deployable system that can deal with missile threats rather than running all over the field trying to discover what is possible to do before focusing on what we need to do.

Mr. PERLE. Senator, could I comment on that? The reference from Mr. Berger was to a proposed understanding with the Russians on the line of demarcation between permitted and prohibited test of systems that are in fact theater defense systems. The administration proposed but has never submitted to the Senate as an amendment to the treaty, a proposal that we limit the speed of an interceptor, not to 5 kilometers, but to 3 kilometers. That unfortunately is too slow for an effective theater defense. It was a terrible mistake to propose that, in my view, but happily, it has no legal status and the new administration is free to proceed in any way it wishes with respect to this.

Let me tell you what the difference is between 3 kilometers a second and 5 kilometers a second. At 3 kilometers a second, a sea-based system, theater system, if we deployed it off the coast of Italy, say in the vicinity of the waters of Rome, could defend our forces in the field in central Italy. Roughly, I think it's 70 or 80 kilometers either side of Rome, at 5 kilometers per second, that same system, other things being equal, could defend most of western Europe. So, the last administration, in an effort which I thought at the time was unnecessary, in an effort to strengthen the ABM Treaty to which it remained committed until it's last day in office, we all understand that, in an effort to strengthen that treaty, burdened our theater missile defense programs with technical and physical restrictions that make it very difficult to justify them. That's the simple truth, and one of the first things we should do is say to the Russians, we no longer think that 3 kilometers per second is an appropriate limitation and therefore we intend to explore sea-based systems at accelerations higher than that because that will give us the potential for a serious defense that can be of significant use to our troops in the field and to our allies.

Senator SESSIONS. Thank you very much.

Senator LEVIN. Thank you, Senator Sessions. Just for what it's worth, Lt. Gen. Lester Lyles, who was the previous head of the Ballistic Missile Defense Organization, said the following in response to a question from Senator Robb in 1998: Senator Robb asked "If you did not have an ABM Treaty, are there things you be doing or could be doing less expensively now?" Lt. Gen. Lyles said "In all honesty, Senator Robb, there's nothing that we would

be doing differently. General Ralston has said there is nothing today in the Antiballistic Missile Treaty that is constraining what we are doing in our national defense program or our theater missile defense program." Now, will we at some point bump up against an ABM Treaty, a program, a National Missile Defense Program? The answer is yes. As a matter of fact, the one that was proposed by President Clinton and if deployed would have bumped up against the treaty, put money in there to develop it, and indeed again on the deployment of it subject to those four conditions which Mr. Berger has laid out for us today.

But what we're facing now is a very different question. Everyone points out that the Cold War is over. It seems to me that that is a given. The Cold War is over. We're grateful for it. Now the question is how do we get from an old structure to a new structure. What you're suggesting, Mr. Perle, we just simply destroy the old structure. Just simply say it's over. We're pulling out of the ABM Treaty which was the keystone to the old structure. Just yank out that keystone, the arch collapses, and now let's build a new arch. I don't think that's any way to treat someone who takes a treaty as seriously as the Russians take this treaty. I happen to fully agree with what Senator Warner said when he said it would be devastating for us to withdraw from a treaty to which President Putin places such great importance. That is not something we should do very readily. We should be exhausting, it seems to me, the possibilities of negotiating a new structure before we reach that conclusion. Does that mean we'll never reach that conclusion? No. We could reach that conclusion, but if you're serious about the Cold War being over and if you're serious about really renegotiating with Russia, you don't put a deadline of months on those negotiations and say then we're pulling out of a treaty which has been so important if we don't succeed within that period of months. Now, what gets me is that we've taken that position for a relatively small gain. In terms of testing, I think what Mr. Coyle has told us is that the testing advantages of what is being proposed for Fort Greely, first of all, could be achieved as I understand what he said at Kodiak, is that correct?

Mr. COYLE. Yes, sir.

Chairman LEVIN. Number 2, those testing advantages wherever they take place are marginal gains, what you could do with one silo are small testing gains in terms of the whole scheme of things. Is that a fair statement, Mr. Coyle?

Mr. COYLE. Yes, sir.

Chairman LEVIN. All right, so that if there's an advantage to negotiating a new structure, and it seems to me there surely is if we're serious that the Cold War is over and that we no longer treat Russia as an adversary. If we're really serious about that and really want to understand why is it that they would like a new structure in place before the old one is destroyed, why is that important to them? If we really want to negotiate something new with them, then we don't put down the ultimatum of months, particularly when the advantage from a testing perspective can be gained somewhere else.

Now, with respect to Kodiak. Assuming you want the advantages, which are very costly but nonetheless, if you want those test-

ing advantages, you can do them somewhere else and you can do them without bumping up against the ABM Treaty or conflicting with the ABM Treaty the way it was phrased last Wednesday. You can do it without conflicting with the ABM Treaty. What conflicts with the ABM Treaty, and I want to be real clear on this, Mr. Coyle, is not what they are proposing in terms of test. As I understand it, if they declare that as part of a test bed, that does not conflict with the ABM Treaty whether it's in Fort Greeley or whether it's at Kodiak. Is that correct?

Mr. COYLE. Yes, sir.

Chairman LEVIN. What is the problem and what does bump up against the ABM Treaty, isn't that robust additional testing? But if they declare or if it is their intent that that development be in addition to a test site a rudimentary operational capability, that is where the conflict comes in. So I want to ask Mr. Coyle this question about that rudimentary operational capability. I want you to judge for us the operational capability of that system, that test bed at Fort Greeley. Would you expect it to be effective in shooting down an operational long-range missile?

Mr. COYLE. If it only had five interceptors and if it didn't have the capability to deal with decoys and countermeasures which so far we haven't demonstrated any capability to handle, it would not be effective.

Chairman LEVIN. Then it seems to me that we all have to weigh whether or not it is advantageous to enter into a new relationship with Russia, to try to negotiate that new relationship. But whether or not in order to get an operational capability at Fort Greeley, which we've just heard is described because it doesn't have those capabilities that Mr. Coyle described, which would be ineffective. In the rush to gain an ineffective capability, we constrain ourselves to months of negotiations with a country for whom this treaty is a very serious matter, has been a keystone in that arch, that structure. As a matter of fact, it has been for us too as well. Secretary Baker even said that, by the way, after the collapse of the Soviet Union.

So, we have a treaty which has been a keystone in an arch of a security arrangement, the removal of which would cause great problems for someone who is no longer an enemy, doing that for no testing advantage because we can declare that as a test site and do all the testing we want, assuming it's worth the money. We can do all the testing we want there to gain an ineffective rudimentary operational capability, whether or not doing that makes us more or less secure. That's what it comes down to. It's a very significant issue that everyone's grappling with. People reach different conclusions on it, but we all start with the same goal, I hope, and that is to make America more secure by that kind of an action. That's the only question. Are we more or less secure? Would our doing that unilaterally, would saying we're pulling out of this treaty, it no longer serves a purpose in our mind, goodbye, sayonara to that kind of a security arrangement. If we do that unilaterally, will we be precipitating a reaction in Russia and China, particularly which maybe from your perspective, Mr. Perle, isn't the way they should react. You can't understand why they would react that way. But if they in fact would react that way because they feel less secure by

our unilateral action and because of the response that they would take to make themselves secure even though Richard Perle doesn't understand it, whether or not that reaction will leave us and the world less secure. It is a major issue.

I would hope that the President would consult not just with our allies and with the Russians and with Congress but with the best minds that he can find of all different persuasions on this issue before he makes this judgment because it is a judgment which would have huge implications for the future. We all agree that North Korea is trying to achieve a capability that we do not want them to have. We would like to have a defense against it, if we could do it without creating a greater threat to ourselves. At least, I'll say that that's where I'm at. I'd love to have a defense against a North Korean missile if I could have it operationally effective and take away whatever leverage that it gets them. But I don't, in that process, want to create a greater danger to ourselves, and we have to weigh all those dangers. That's the broader picture which Mr. Berger talked about as he opened up this discussion today.

It's been a long morning for all of you and I would like to ask Mr. Coyle, for the record, to do the following. I don't know that we went into great detail on those three pages which Secretary Wolfowitz gave to us. I gather you did not see those until today. Is that correct?

Mr. COYLE. In exactly the form they're in, no. But I had read about them in other ways.

Chairman LEVIN. I would like you to take a look at them in the exact form in which we received them and made them part of the record, and to then analyze for us how they might bump against or conflict with the ABM Treaty, in your judgment. I would offer to each of our other witnesses an opportunity to comment on the same question if you wish and with that we will bring this hearing to a close.

[The information referred to follows:]

THE MISSILE DEFENSE SYSTEM TEST BED

Plans and Purpose

- Test Bed as a Whole. Allows overall system performance testing to occur using more realistic threat trajectories and allowing more complex engagement scenarios.
- Launchers.
 - Construction at Fort Greely, AK (5 silos) will be in the spring or early summer next year. Once complete, the five silos will allow tests of operational command and control, communications, and the capability of the long haul communications network; rehearsal of maintenance and upkeep processes; and assessment of the adverse effects of Arctic conditions at a potential operational site.
 - The two Kodiak, AK launcher silos to be constructed in the spring/summer of 2003 will allow higher closing velocities, more realistic test geometries, and multiple engagements.
- Radars. At least three large phased-array radars will be part of the Missile Defense System Test Bed: Cobra Dane (Shemya, AK), Beale, CA, and a new X-Band in the mid-Pacific.
 - Cobra Dane currently collects data on ballistic missile launches from Russia and also has the mission of early warning and space track. An upgraded Cobra Dane radar will provide enhanced early warning and may have some ABM radar capability.
 - Initial upgrades are software modifications like those ongoing for the Beale, CA early warning radar. No changes to the radar's hardware are currently planned.
 - Boeing is investigating what additional upgrades to Cobra Dane might be appropriate, and when. Possibilities range from mere software upgrades to significant physical modifications. We will know our options this fall.
 - In any operational system, we anticipate that the X-Band radar at Shemya would be required to provide needed discrimination, even with all possible upgrades to Cobra Dane.
 - Beale software modifications will not raise ABM Treaty issues before FY04.
 - Current plans contemplate constructing an X-Band radar in the mid-Pacific in FY06.
- In-Flight Interceptor Communications Systems (IFICS) to be constructed next spring/summer may raise ABM Treaty issues depending on whether they are determined to be subcomponents of an ABM radar.

AEGIS SPY-1 TRACKING A STRATEGIC BALLISTIC MISSILE

Plans and Purpose

- Plans to use an AEGIS SPY-1 radar to track long-range ballistic missiles are currently under development and are only at a preliminary stage.
- The most likely near-term scenario is for an unmodified AEGIS SPY-1 radar to track an outgoing target immediately after its launch from Vandenberg Air Force Base during an ABM intercept attempt at Kwajalein Missile Range.
- This test would provide initial data for assessing the basic capability of the AEGIS SPY-1 radar to track long-range targets that will assist in formulating AEGIS development options.
 - The AEGIS SPY-1 radar may be connected to the test's command, control and data communications backbone.
 - The SPY-1 radar, however, would likely not contribute to the data used to complete the intercept (i.e., it will not help guide the interceptor).
- Future (and currently unprogrammed) plans might include an AEGIS SPY-1 radar:
 - Collecting intercept data at the ABM test range during ABM testing.
 - Providing real-time data to the U.S. strategic early warning system.
 - Providing data to assist an Integrated Flight Test intercept attempt.
 - The AEGIS SPY-1 radar might also participate in testing at the Missile Defense System Test Bed using targets with various ranges and velocities.
- We eventually expect to integrate a modified, more capable version of the AEGIS SPY-1 radar into tests of our boost and ascent phase elements.

SYSTEMS INTEGRATION TEST II (SIT II) COMBINING DATA FROM ABM AND NON-ABM RADARS

Plans and Purpose

- We will conduct a short-range missile defense test beginning next February.
 - Three targets will be tracked by two AEGIS SPY-1 radars, a Patriot PAC-3 radar and the THAAD UOES radar.
 - An ABM radar located at Kwajalein Missile Range will also track each target, but will not communicate with any of the other radars.
 - During the flight test of at least one target missile, a Patriot PAC-3 missile system will attempt an intercept.
- The ABM radar will obtain data supporting all U.S. TMD programs. This is critical information as to how both our interceptor and the threat targets behave, as well as unique information measuring the lethality of the intercepts. Using the ABM radar will significantly improve the quality of the information gained from the test.



CENTER FOR DEFENSE INFORMATION
1779 Massachusetts Ave, NW • Washington, DC 20036-2105

September 6, 2001

The Honorable Carl Levin
Chairman
Senate Committee on Armed Services
Washington, D.C. 20510

Dear Mr. Chairman:

On July 19, 2001, the Senate Committee on Armed Services held a hearing on ballistic missile defense policies and programs, in review of the Defense Authorization request for Fiscal Year 2002. During that hearing you requested that I examine test plans proposed by the Administration, analyze how each of those plans might bump up against or conflict with the Anti-Ballistic Missile (ABM) Treaty, and provide my analysis to the Committee to become part of the hearing record.¹ This letter responds to your request.

The specific test plans in question are described briefly in three pages attached to the Prepared Statement by Deputy Secretary of Defense Paul Wolfowitz for a Senate Armed Services Committee hearing on Ballistic Missile Defense held on July 17, 2001. In particular, those three pages described four sets of test plans:

1. Construction of five interceptor missile silos at Fort Greely, Alaska, and two launcher silos at Kodiak, Alaska.
2. Upgrade of the Cobra Dane radar at Shemya, Alaska, upgrade of the early warning radar at Beale AFB, and construction of a new X-Band radar in the mid-Pacific.
3. Plans to use an AEGIS SPY-1 to track a strategic ballistic missile.
4. Plans to conduct a Systems Integration Test (SIT II) combining data from ABM and non-ABM radars.

Each of these proposals is discussed below:

Construction of missile launchers at Fort Greely and Kodiak:

While serving as Director, Operational Test and Evaluation in the Pentagon, I recommended that the National Missile Defense (NMD) Program Office take steps to improve the operational realism of its testing. One of the recommendations I made was that target launches be fired from Kodiak towards Kwajalein in order to achieve more realistic viewing distances with the Early

¹ See official transcript, bottom of page 137, lines 15 to 25.

Warning Radar at Beale AFB near Sacramento, and also to achieve more realistic engagement geometries in flight intercept tests with an interceptor launched from Kwajalein. It appears that the Ballistic Missile Defense Organization (BMDO) and the NMD Program Office are acting on this recommendation, and I support the establishment of a test capability at Kodiak for this purpose.

Other parts of the Administration's proposed test bed are more problematic.

As part of the Missile Defense System Test Bed, the Administration also has proposed to construct a missile field at Fort Greely, with five missile silos capable of launching Ground-Based Midcourse interceptor missiles.

Fort Greely is the site where the U.S. Army has maintained its Cold Regions Test Center. It gets very cold at Fort Greely, and it is an ideal spot for realistic cold weather testing. If NMD interceptors and command, control, and communications systems are to be deployed at Fort Greely, one would certainly want to understand the effects of cold weather. However, a single missile silo would suffice for that purpose.

Also, it is questionable whether test interceptors would be fired from Fort Greely, since the first stage and other debris from such test missiles could fall on populated areas. An advantage of the Kodiak test site, whether launching targets towards Kwajalein or launching test interceptors, is its proximity to open ocean. In any case, test interceptors would not be fired from Fort Greely early in the research and development program. For safety reasons, it would be prudent to keep such launches to a minimum, and conduct them after many other more fundamental questions have been answered in developmental and operational testing.

Part of the operational concept for Ground-Based Midcourse missile defense is to fire four or five interceptors, if necessary, to bring down one incoming enemy missile. At some point, it would be necessary to test such salvo launches in realistic conditions; however, such tests would come after the research and development phase was much farther along, and after the capabilities of individual interceptors were better understood.

Therefore, the necessity to construct five missile silos at Fort Greely for test purposes is certainly premature. For many years a single silo would suffice.

If five interceptor missile launch silos were constructed at Fort Greely, and if the purpose of those launchers was to establish a rudimentary operational capability to defend the United States against ICBM attacks, then that missile field could conflict with the ABM treaty. However, the Department of Defense has not demonstrated realistic operational capability with individual missiles, let alone with five fired in salvo. Also, the research program to demonstrate the ability to deal with countermeasures and decoys will require many years of development. Russia may regard five missile silos at Fort Greely as a violation of the ABM treaty if those silos and

associated command, control, and communications equipment were not actually used for testing and since it is questionable how soon, or when, test interceptors might be fired from Fort Greely.

Upgrade of the Cobra Dane radar at Shemya:

The Administration proposes to upgrade the existing Cobra Dane radar at Shemya. However, this is a fixed radar and cannot see test launches from Kodiak, from Vandenberg AFB in California, or from Kwajalein. The Cobra Dane radar is pointed in the opposite direction towards the Kamchatka Peninsula.

Thus, the main purpose of upgrading the Cobra Dane radar would appear to be to establish an improved operational capability to detect ICBM launches from North Korea, Russia, or China. Accordingly, under the ABM treaty, Russia might object to the proposed upgrade of the Cobra Dane radar as a test facility since it cannot see U.S. flight tests from Alaska, California or Kwajalein.

The Cobra Dane radar could see air-launched targets or targets launched from the Bering Sea, but the launch platforms would need to be close to Russian or Chinese territory, and even then the target trajectories would be short-range and unrealistic. With cooperation from Russia or China, targets could be launched from within their territory towards Shemya with longer, more realistic trajectories that fell within the field of view of the Cobra Dane radar, but this cooperation would be such a remarkable development it could call into question the need for National Missile Defense.

Since an upgraded Cobra Dane radar cannot observe U.S. test launches from Alaska, California or Kwajalein, and the prospect of U.S. test launches within its field of view is questionable, the upgrade likely would prompt objections from Russia under the ABM treaty.

The proposed upgrade of the early warning radar at Beale AFB and the construction of a new X-band radar in the mid-Pacific, if justified and used for testing, would be permissible under the ABM treaty if they were declared as new ABM test sites.

AEgis SPY-1 tracking a strategic ballistic missile:

This test would not be consistent with the ABM treaty, since it would be an attempt to operate a theater missile defense radar "in an ABM mode." However, this test would be very preliminary, and would not involve an attempted intercept. The SM-3 missile isn't fast enough to do NMD-class boost phase intercepts, in any case.

The Navy Theater Wide program has been slipping because of difficulties with the missile divert attitude control system. The intended schedule just for the theater mission, and the first Navy Theater-Wide ALI (Aegis LEAP Intercept) intercept attempt, has slipped six months or more. NMD boost-phase intercept attempts are still years away because the SM-3 isn't fast enough, and because the kill vehicle is a LEAP (Lightweight Exo-atmospheric Projectile) design. Because it is lightweight, it will need to be tested to show it can handle the accelerations needed for boost-phase intercepts, and be lethal to an NMD target if it hits the target.

Thus, the proposed AEGIS SPY-1 tracking test is a test that could be said to bump up against the ABM treaty, but which would do so long before other more stressing aspects of Navy boost-phase technology would be far enough along to justify it. However, in recent public statements, Russia has indicated flexibility with respect to preliminary U.S. test efforts.

System Integration Test combining data from ABM and non-ABM radars:

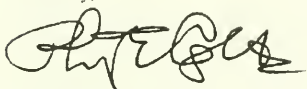
In this proposed short-range missile defense test, three targets would be tracked by two AEGIS SPY-1 radars, a Patriot PAC-3 radar and a Theater High Altitude Area Defense (THAAD) radar. The Administration has not said what those targets would be. If all three were short-range targets, this test would not conflict with the ABM treaty. The ABM treaty permits theater missile defense. However, if one or more of the targets were an ICBM target, then (as in the AEGIS SPY-1 test above) this would be an attempt to operate theater missile defense radars in an "ABM mode." Also, as above, this test would not involve an intercept attempt with PAC-3 or THAAD since, like Navy Theater-wide, these systems do not have the capability to perform NMD boost-phase missions.

The attachment to Secretary Wolfowitz's prepared statement indicates that in this test an ABM radar located at Kwajalein also would track these targets, but not communicate with any of the other radars. The ABM treaty does not prohibit the use of an ABM radar in isolation to track theater targets, and the Kwajalein radars are already being used to track ICBM targets in other tests in full compliance with the treaty.

Thus, this fourth proposed test may muddy the water somewhat with respect to the ABM treaty, but does not in and of itself, represent a significant challenge to the treaty.

As the Administration's plans develop, further details may emerge about these or other proposed missile defense tests. If I can be of assistance in reviewing these future test plans, please do not hesitate to have your staff contact me.

Sincerely,



Philip E. Coyle, III
Senior Advisor

cc: The Honorable John W. Warner

Chairman LEVIN. We will stand adjourned. Thank you.
[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR E. BENJAMIN NELSON

1. Senator BEN NELSON. Mr. Perle, in his testimony, Philip Coyle said that a missile defense system is a matter of cost and workability. Isn't he right?

[The information was not provided in time for printing of this hearing. When received, it will be retained in committee files.]

2. Senator BEN NELSON. Mr. Perle, Secretary Rumsfeld said missile defense is a "scarecrow" which would serve as a deterrent to potential aggressors. Deputy Secretary Wolfowitz has said missile defense is not a scarecrow. Who is right?

[The information was not provided in time for printing of this hearing. When received, it will be retained in committee files.]

3. Senator BEN NELSON. Mr. Perle, how workable does a missile defense system have to be to be an effective deterrent?

[The information was not provided in time for printing of this hearing. When received, it will be retained in committee files.]

4. Senator BEN NELSON. Mr. Perle, how would you advise the Secretary and President to prioritize their financial resources in terms of the potential threat of a rogue states launching a missile at the U.S. and our allies versus the threat of weapons of mass destruction?

[The information was not provided in time for printing of this hearing. When received, it will be retained in committee files.]

5. Senator BEN NELSON. Mr. Perle, shouldn't we continue to pursue development of a national missile defense system first before pushing toward deployment of a system still being tested? If the threat level increased, I have no doubt that we would be able to speed up our development phase as was the case during the Gulf War with the Patriot system.

[The information was not provided in time for printing of this hearing. When received, it will be retained in committee files.]

6. Senator BEN NELSON. Mr. Perle, at what point would you recommend we move to deployment of a land-based missile defense system?

[The information was not provided in time for printing of this hearing. When received, it will be retained in committee files.]

QUESTIONS SUBMITTED BY SENATOR SUSAN COLLINS

7. Senator COLLINS. Mr. Berger, during your tenure as National Security Advisor, the Clinton administration engaged in discussions with Russia on revising the ABM Treaty to permit the United States to deploy a national missile defense system. President Bush has said that he would also like to reach an agreement with Russia that would pave the way for deployment of a system to defend the United States against missile attack. I assume you support President Bush's efforts to reach such an accommodation with Russia, is that correct?

Mr. BERGER. I support a mutual agreement to amend the ABM Treaty in ways that would enable us to pursue a limited national missile defense.

8. Senator COLLINS. Mr. Perle, we have heard many opponents of missile defense warn that if the United States withdraws from the ABM Treaty to deploy a missile defense system, the Russians and Chinese might build up their nuclear forces and an arms race would ensue. Then the Russians and Chinese dutifully threaten just such an outcome, and those same critics point to those threats as confirmation of their theory. It becomes sort of an echo chamber in which the threats are bounced back and forth between the Russians and domestic opponents of missile defense. How seriously should we take such threats, or are these discussions simply rhetoric to slow down the progress the United States makes on developing a robust, layered missile defense system?

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9. Senator COLLINS. Mr. Perle, would it not be in the interest of Russia and China to make these threats knowing that missile defense critics will themselves dutifully echo them in their efforts to prevent deployment of a robust, layered missile defense system?

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[Whereupon, at 1:08 p.m., the committee adjourned.]



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